JPRS 76013 9 July 1980

East Europe Report

ECONOMIC AND INDUSTRIAL AFFAIRS No. 2022

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EAST EUROPE REPORT ECONOMIC AND INDUSTRIAL AFFAIRS

No. 2022

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LONG-TERM CSSR-USSR COOPERATION REVIEWED

Prague PLANOVANE HOSPODARSTVI in Czech Apr 80 pp 15-21

[Article by Eng Josef Merhaut, State Planning Commission: "A Long-Term Program of Production Cooperation and Specialization Between the CSSR and the USSR"; material between slant lines printed in boldface]

[Text] "This is a major program of integration of far-reaching importance for the realization of our economic intentions." Vaclay Hula

"We regard technological development as the key to resolving the problem of production efficiency." Nikolay Baybakov

A long-term program for the development of production specialization and cooperation between the CSSR and the USSR through 1990 was signed in Prague on 13 March 1980 by the leaders of the two governments' delegations, Vaclav Hula, deputy premier of the CSSR Government and chairman of the State Planning Commission, and N.K. Baybakov, deputy chairman of the USSR Council of Ministers and chairman of the State Planning Committee. This is a document of great political and economic importance that spells out in detail in the agreements in principle arrived at during the meeting in the Crimea in 1977 between Comrade G. Husak, general secretary of the CPCZ CC and president of the CSSR, and Comrade L.I. Brezhnev, General Secretary of the CPSU CC and chairman of the Presidium of the Supreme Soviet of the USSR. These agreements were further elaborated during negotiations between party and state delegations from the CSSR and the USSR in May 1978 and at meetings between the premiers of the two governments in 1979.

Party and governmental agencies devoted special care to work on drafting the long-term program. After 2 years of effort, a document was drawn up under their leadership that contains an extensive system of bilateral measures intended to pave the way for the continued expansion and consolidation of mutually advantageous long-term economic and scientific technological cooperation and the integration of the material resources and scientific-technological potential of the two states in the interest of a common solution to the problems involved in carrying out their massive long-term economic tasks in order to increase the effectiveness of social production.

Drafting this long-term program for the development of production cooperation and specialization between the CSSR and the USSR, as well as other more specific documents, is an objective necessity arising from the level of the integration of their economies already achieved and the need for their continued growth. During the years of building socialism and communism, industrial production in both states increased to many times its original amount, and the list of products manufactured has lengthened significantly. Trade between the CSSR and the USSR has risen from Kcs 1.7 billion in 1948 to Kcs 46 billion in 1978. The share of the USSR in the CSSR's foreign trade rose from 16.2 percent to 34.1 percent during that period.

Another factor that makes production cooperation and specialization an objective necessity is the ever-growing trend toward providing industrial products with auxiliary equipment, units and components. This is a result of the economically effective production of modern products requiring more complex equipment, higher-grade materials, a larger number of tools and more work by better-trained workers and engineers. Organizing the production of a wide range of products at a high technological level within the limits of a single country is quite difficult, and on the economic scale of a small country like Czechoslovakia, virtually impossible.

This bilateral program for production specialization and cooperation between the CSSR and the USSR stems from provisions of the Comprehensive Program of Further Expansion and Improvement of Cooperation and the Development of Socialist Economic Integration and adds to the list of target cooperation programs between states drafted and implemented on a multilateral basis within the framework of CEMA.

The long-term program of production cooperation and specialization between the CSSR and the USSR is intended to contribute to:

- -- the stable development of the economies and the most rational production patterns possible of the relevant material production industries of the CSSR and the USSR so as to best meet the needs of the two states for the particular products;
- --increasing the economic effectiveness of production through the use of the rational international socialist division of labor, and specifically in sharing in production programs for modern forms of arrangements including the development of cross-supplying semifinished products;
- --concentrating production, which insures that it is on the optimal scale, thereby making it possible to introduce high-efficiency production processes and organizational methods;
- -- the production of products in short supply in the CSSR and the USSR with the goal of limiting their economically impractical importation and of increasing exports of them to the other CEMA-member states;

--providing the machinery and equipment necessary for developing the fuel and energy and the raw material sectors of the two states;

--developing and applying advanced technological processes and producing the machinery and equipment that will contribute to conserving fuels, raw materials and other materials;

--increasing the technological level and quality of the machinery, equipment and semifinished products they supply each other.

The Focus of Cooperation in Developing the Material-Technical Base of Production

The long-term program encompasses the entire set of economic and scientifictechnological relations and establishes the major strategic-directions for bringing the economies of the two countries closer together.

In view of the fundamental importance of providing the basic types of fuels and raw materials for the development of the national economy, the document prescribes those forms of cooperation that have proved their worth in this area and specifies others that must be developed, thereby contributing to expanding the basis for the development of production cooperation and specialization between the two states.

The CSSR and the USSR will coordinate their use of the material potentials of the two states and will develop various forms of cooperation in this area. Long-term needs for fuels and raw materials will be secured for the long term by combining material and technological resources in construction in the fuels and raw material sectors and by supplying each other with complete units, machinery and equipment, chemical products, consumer goods and other products. Cooperation projects aimed at rationalizing and conserving fuel utilization will also be expanded.

In order to stabilize the provision of chemical products important to the national economies of both states, energy-intensive chemical products will be supplied by the USSR in exchange for less energy-intensive, low-tonnage chemical products from the CSSR.

The material and technological bases of the fuels and raw materials sectors of the two countries are to be strengthened by expanding cooperation in the production of modern equipment, principally for over-burden removal, ferrous and nonferrous metallurgy, the chemical and petrochemical industries, as well as nuclear energy.

Intensifying the international socialist division of labor, and the growth of the exchange of goods between the two states associated with this, demands that the necessary long-range measures be taken to improve transporation between them. The carrying capacity of border railroads and crossing will be increased, and a new 1,435-mm gage rail border crossing between the CSSR and the USSR is to be built. At the same time, river and truck transport

will be used to a greater extent in the two countries' foreign trade, the share of container shipping is to increase and the problems involved in the shipment of fluid substances are to be solved.

The Basic Directions for Cooperation in the Area of Science and Technology

The extensive 10-year program of development of production specialization and cooperation between the CSSR and the USSR envisages their corresponding provision in the area of scientific-technological cooperation. Through the rational utilization of the scientific-technological potentials of the two countries they shall:

- --develop and put into production new, highly efficient types of equipment, machinery, instrumentation and materials corresponding to the highest world level;
- --incorporate modern technologies providing a high level of automation and a significant increase in labor productivity;
- --on the basis of unified standards, develop and put into production semiproducts with a high degree of reliability corresponding to the demands made of the final product;
- --create the conditions for increasing the output and improving the quality of consumer goods to better satisfy the demands of the populations of both states.

The long-term program establishes tasks in scientific-technological cooperation between the research and development and the design and construction organizations of the two countries in the area of the production and utilization of fuels and energy; the development of new technological processes and installations for metallurgy, chemical production, light industry; the development and production of microelectronic products; and the development of advanced technology mainly of automated production complexes to increase labor product productivity. It also includes tasks in transport, in the development of new technologies, of structures and institutions for civil construction, in the building-materials industry and in the area of agricultural intensification, as well as the research, development and utilization of advanced biological techniques in agriculture, the food industry and the health-care system.

In developing scientific-technological cooperation, the ministries, the scientific-research and design and construction organizations of both countries must proceed from the necessity of closely linking this with the tasks of production specialization and cooperation so that the results obtained can be made available to the national economy in the shortest time possible. They will continue to organize consultations on questions of planning scientific-technological progress and increasing the effectiveness of scientific-technological work, perfecting such forms of cooperation as joint collectives of scientists and specialists, scientific councils, joint laboratores, etc. To this is being added developing and intensifying

cooperation of activity in the area of scientific-technological information, and propaganda to insure the coordination of the information systems of the two states.

In the area of standardization and unification, the CSSR and the USSR will take steps to accelerate the introduction of CEMA standards, which will insure that the technological level of products is raised, and if necessary they will approve national standards for products jointly produced in the two states, as well as for parts, units and semiproducts they supply each other under the terms of cooperation agreements.

The Fundamental Directions for the Development of Industrial Specialization and Cooperation

The provisions on the fundamental directions for the further development of industrial specialization and cooperation between the CSSR and the USSR through 1990 constitute the focal point of the document that was signed. They call for the continued development of the rational division of labor that has been worked out between the two countries over the last 10 years. The organizations and enterprises of both countries, however, must take care that the traditionally supplied goods are up to the modern scientifictechnological level and contribute to a fundamental increase in effectiveness in the pertinent sector of the national economy.

The further intensification and expansion of this mutually advantageous specialization of and cooperation in production will be aimed chiefly at developing new types of machinery and equipment and high-quality materials and their more rapid introduction into production. The two states will attempt to achieve a rational utilization of existing specialized capacities and will coordinate the construction of new capacities, primarily the reconstruction and modernization of existing enterprises. In each individual case, the CSSR and the USSR will take the specific production conditions as their starting point, taking into consideration the qualified cadres and the production experience, highly efficient facilities and the necessary raw and other materials they have available.

The two parties will devote special attention to the further development of cooperation, specifically by organizing mass production, the cross-supplying of semifinished products and units and the rational division of the production of individual sections of a complex investment facility and arrangements for complete enterprises.

In the long-term program, it is stated that the CSSR and the USSR will expand and intensify production specialization and cooperation primiarily in the following sectors of the economy:

- --heavy and transport engineering;
- -- power industry engineering;
- -- the electrical industry;

- -- the chemical and petroleum industry;
- -- the machine-tool and instrument industry;
- -- the automotive industry;
- -- tractor and agricultural engineering;
- --engineering for livestock production and animal-feed production;
- -- the production of hydraulic equipment;
- -- the electronics industry;
- -- computer technology;
- -- instruments and means of automation;
- -- engineering for the light industry;
- -- engineering for the food industry;
- -- the chemical industry;
- -- the petrochemical industry.

This listing of 16 industrial sectors of the economy is not to imply that the sphere of specialization and cooperation cannot be expanded to include other areas. In the document, it is expressly stated that work aimed at developing specialization and cooperation and intensifying collaboration can also be carried out in other sectors of the national economy in which both states are interested in so doing.

Evidence that the list of sectors in which production specialization and cooperation will be carried out is not exclusive is the resolution by the 20th session of the Inter-Governmental Czechoslovak-Soviet Commission for Economic and Scientific-Technological Cooperation, which establishes an additional three sectors for long-term specialization and cooperation, namely the radio engineering industry, construction and roadbuilding machinery, and shipbuilding.

The Means for and the State of Realization of the Long-term Program of Industrial Specialization and Cooperation

As a means of insuring the most important principles and the strategic goals of cooperation established by the long-term program, the ministers of the two states are jointly drawing up the basic directions (sector subprograms) for developing production specialization and cooperation, specifiying in these the [substantive] content and the forms cooperation is to take in the sectors of the national economy participating in the program or whose

participation is later agreed upon by the two parties. They are also planning the necessary measures in the related sectors that will provide semifinished products, the necessary materials, etc, for the realization of this program.

After negotiating the basic directions (sector subprograms) for the development of specialization and cooperation with the central planning organs of the two states, the ministries present them for approval to the Inter-Governmental Czechoslovak-Soviet Commission for Economic and Scientific-Technological Cooperation. The basic directions (sector subprograms) negotiated and ratified in this way are then signed by the leading representatives of the ministries of the two states that are responsible for implementing them.

The basic directions (sector subprograms) are specificing documents that constitute an integral element of the entire set of measures on de eloping production specialization and cooperation carried out in accordance with the long-term program.

Just like the list of sectors given in the long-term program, these basic directions (sector subprograms) are open-ended documents. In cases in which it will be considered practical types of products agreed upon by the ministries of the two countries, the basic directions (sector subplans) will be adapted or supplemented. For this, too, the agreement of the central planning agencies of the CSSR and the USSR will be required.

The most important form the implementation of the measures contained in the basic directions (sector subprograms) for the development of production specialization and cooperation will take is that of agreements concluded between the cooperating agencies or organizations of the two countries. These will include sets of provisions concerning scientific-technological and design-construction work, the volume of production tasks and the technical level of products, the extent and conditions of their deliveries to each other, as well as questions of price.

The long-term program establishes that the obligations connected with its implementation and contained in the above-mentioned agreements will be reflected in the national-economic plans of the CSSR and the USSR (annual, five-year and prospective). They are also to be incorporated into the protocols on the coordination of plans between the CSSR and the USSR, while the development of multilateral cooperation among the CEMA member states is to be kept in mind.

/The obligations arising from the long-term program and the agreements associated with it are to be at the same time fixed in long-term commercial agreements, in the annual protocols on the exchange of goods, and in the pertinent contracts concluded between the organizations of the two states. Finally, they are to be heeded in [drawing up] the work plans of the cooperating ministries.

/Implementing the set of measures connected with the long-term program for the development of industrial specialization and cooperation between the CSSR and the USSR will be conducted in conjunction with measures of the multilateral target programs of the CEMA member states ratified at their 22nd and 23rd sessions in 1978 and 1979./

An important role in the formulation and the implementation of the measures connected with the long-term program for the development of production specialization and cooperation belongs to the Inter-Governmental Czechoslovak-Soviet Commission for Economic and Scientific-Technological Cooperation. Between 1978 and 1980, the commission and its Czechoslovak and Soviet parts organized the work of the central planning agencies and ministries on drawing up the draft of the long-term program and the basic directions (sector subprograms) for production specialization and cooperation in the relevant sectors of the national economy. At its 20th session, held on 4 to 6 February 1980 in Moscow, the commission decided on the final wording of the draft long-term program and recommended that it be signed. At the same time it ratified the "List of Major Types of Products for which Specialization and Cooperation Will Be Conducted," which is to serve as a basis for the further elaboration of sector subprograms. This list sets forth in detail for every sector mentioned in the long-term program what type of production (or products) the CSSR and the USSR will specialize in and also designates the one bearing responsibility for the tasks, that is, the ministries responsible for formulating and implementing the basic directions (sector subprograms) for developing specialization and cooperation.

In light of the fact that during the period between the 19th and the 20th sessions of the commission work had already been completed on drawing up several sector subprograms, the commission at its 20th session agreed to their signing. At the conclusion of the talks, the ministers of the cooperating ministries of the two countries of the basic directions (sector subprograms) for the development of industrial appropriation and cooperation in these sectors:

- --heavy and transport engineering;
- --chemical and petroleum engineering;
- -- tractor and agricultural engineering;
- -- engineering for livestock production and animal feed production;
- -- the electronics industry;
- -- the petrochemical industry;
- -- and the chemical industry.

The sector subprograms that were signed established the basic directions for the development of production specialization and cooperation between the CSSR and the USSR, stipulated the introduction of the specialized production of new machinery and equipment and provided lists of products for which the parties will investigate the possibilities of production cooperation. The sector subprograms emphasize measures to increase the technological level and the quality of the specialized products supplied to each other. They also refer to working out and introducing standards for specialized products that are the object of mutual deliveries between the two states.

For the remaining sector subprograms, the commission established a schedule for their completion that would enable them to be signed sometime in 1980. They also confirmed the type model for sector subprograms which is a basis for the ministries for their work on formulating their programs and at the same time decreed that the ministries of the CSSR and the USSR draw up draft agreements for the sector subprograms.

The timeliness of the long-term program for the development of industrial appelalization and cooperation between the CSSR and the USSR through 1990 consists in the fact that it was completed and signed at a time when in both of the fraternal states intensive work was under way on preparing the directives for the approaching five-year plans for the development of the national economy and at a time when the communist parties of Czechoslovakia and the Soviet Union are actively proceeding to preparing materials for their upcoming congresses. The long-term program will make a significant contribution in this work toward instituting the further development and the intensification of Czechoslovak-Soviet economic cooperation.

Thanks to the fact that the long-term program, together with the complex of specifying documents, incorporates the directions for the development of production specialization and cooperation between the CSSR and the USSR through 1990, it makes it possible to approach the tasks of mutual cooperation in 1981 to 1985 not only from the standpoint of one five-year plan, but also taking into consideration the agreed-upon strategy and the specific directions for specialization and cooperation from the long-term perspective.

Implementating the set of measures and obligations connected with the long-term program will fundamentally affect the rational long-term streamlining of the Czechoslovak processing industry, in particular engineering, and will contribute to ensuring the stability of the further development of the entire CSSR economy. In the spirit of the resolution of the 15th CPCZ Congress, it will lead to increasing the participation of the CSSR in the international socialist division of labor and closer economic ties between our economy and that of the Soviet Union.

The long-term program for the development of production specialization and cooperation between the CSSR and the USSR through 1990 is one link in a chain of similar long-term programs that the Soviet Union, on the basis of the Crimea agreements between Comrade L.I. Brezhnev and the leading representatives of the fraternal communist and workers parties, has concluded, or is concluding, with the European members of CDMA. These programs taken as a whole represent a specific path to making the coming two five-year plans a period of intensive industrial and scientific-technological cooperation among the fraternal states.

At a time when there is a surge in the Cold War campaign and a threat of an embarge by American imperialist circles, the implementation of the complex of measures contained in the long-term programs of production specialization and cooperation among the CEMA member states takes on even greater importance. It will lead to further growth in the economic and scientific-technological potential of the fraternal states in the interest of consolidating the positions of socialist society and its authority in the world economy, and in the interest of supporting worldwide international cooperation.

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CEMA COOPERATION WITH WEST IN CHEMICAL INDUSTRY.

Sofia VUNSHNA TURGOVIYA in Bulgaria No 12, 1979 pp 2-6

[Article by Mariya Lazarova: "Bast-West Industrial Cooperation in the Chemical Industry"]

[Text] The chemical industry has an important position in the Bulgarian national economy. It is one of the dynamic sectors. It is of great importance as a markedly structurally-determining sector. Under the conditions of the scientific and technical revolution its role is increasing further and further in the development of the material and technical base of the national economy. Qualitatively new changes have taken place in the structure of the chemical industry itself. The development of the chemical industry in the country is taking place primarily with the cooperation among CEHA-member countries, in the course of which the problems of the development of the various production facilities in this sector are being essentially resolved.

As the same time, the chemical industry is characterized by specific features such as high capital intensiveness, fast growth of the production nomenclature as a result of its close link with the development of the science of chemistry, the need for the extensive practical utilization of scientific and technical research, and the requirement to steadily renovate the nomenclature of chemical output. An indicative factor is the high level of concentration of scientific research and of patenting of inventions.

These prerequisites along with others such as, for example, unused reserves for the expansion and intensification of mutually profitable economic relations, create conditions for the development of other forms of economic cooperation, along with traditional foreign trade. In addition to being resolved within the framework of the socialist CEMA comity, a number of problems related to the production of and trade in chemical products are being resolved through economic cooperation with the developed capitalist countries. This makes it possible to meet requirements for some scarce goods produced by CEMA, to use technological achievements, master new production facilities, and expand exports of chemicals to the capitalist countries for various forms of economic cooperation.

However, the capitalist chemical industry is dominated by high level monopolies. In the international capitalist market for chemicals, partners from other countries clash with the dominated position of concerns such as Hoechar, BASF, Bayer, and Henkel which control over two-thirds of the output. The monopolizing of this area largely explains the difficulties encountered in purchasing or mastering the production of new preparations, and the high level of prices of goods exported by the monopolies. They join efforts to maintain such price levels and in engaging in more complex forms of cooperation similar to other sectors.

In the chemical industry industrial cooperation is distinct from cooperation in other sectors, particularly machine building, due to the need to process a number of semifinished goods at their destination in order to obtain the finished product. This involves either the availability of the necessary installations and equipment or the purchasing of semifinished products, under proper conditions, for producing the finished items.

Industrial cooperation does not require the existence of reciprocal advantages to the partners belonging to the two opposite socioeconomic systems. In this sense we may indicate some of the advantages of the socialist partner in such cooperation. Added to the mentioned increased production effectiveness, higher social labor productivity, and reconstruction and modernization of individual production facilities, are the acquisition and utilization of modern scientific and technical achievements in the industry, including the application of new developments and new technologies, improving the quality of output and raising its technological standards; the possibility to purchase modern equipment and machines under more favorable conditions; greater investment possibilities, the use of the distribution system of capitalist companies on their territory, and the possibility for the long-term purchasing of the necessary semifinished and other products through industrial cooperation.

It would be no exaggeration to stress that the capitalist countries enjoy particular benefits from their cooperation with the socialist states. This is based, above all, on the stability of the socialist economic system and the planned nature of its national economy and foreign economic relations which are not under the direct influence of the circumstances governing the capitalist economy, inherent in economic relations among the capitalist states. The broadening of economic cooperation with the socialist countries is, furthermore, a factor which contributes to increasing the use of production capacities, reduces unemployment, procures certain necessary raw materials, and so on.

As a sector in which technical progress plays a prime role, a considerable percentage of the contracts for industrial cooperation which were signed were in the chemical industry, holding second position in the sectorial breakdown (after machine building which accounted for 32 percent in 1977 and 38 percent in 1978), with 24 percent in 1977 (compared

with 18 percent in 1976²) and 26 percent in 1978. They hold a similar position by individual socialist country as well. The breakdown of contracts for industrial cooperation by socialist country (a study of 658 contracts concluded in 1977 and, respectively, 314 in 1978, excluding Yugoslavia) in the chemical industry indicates that the highest share is held by the USSR with 40 percent; Poland and Hungary, 18.5 percent each; Romania, 13 percent, and so on. As to the breakdown of contracts for industrial cooperation in the chemical industry by form, the leading position is that of supplies of complete projects and equipment paid for in output, the so-called compensation agreements of a new type, followed by contractual specialization and joint production, including "sub-procurements" (under the general heading of implementation of joint production programs). Joint cooperation in third countries, the establishment of mixed enterprises, and others, are already playing a considerable role.

The practical experience of the Bulgarian People's Republic in the field of industrial cooperation with the developed capitalist countries in the chemical industry is generally not different from that of the other socialist countries. The socialist countries have already achieved considerable experience in this field. Unquestionably, it has its characteristics in the individual socialist countries. Thus, for example, in the chemical industry there is substantial cooperation with the USSR, particularly in procurements of complete chemical projects and initaliations, paid out in output by existing enterprises or with other products, including raw materials, and so on.

The USSR plays the main role among the individual socialist countries in terms of the number and importance of contracts concluded in this area. Let us note the following among them: A contract for building big industrial projects on the territory of the USSR, such as a plant for artificial fibers to be built by Teyjin, a Japanese company; two plants for methanol (in the Urals and Siberia), by British companies; production of foam latex, by license purchased from Dunlop Ltd. The USSR is procuring complete equipment for 12 chemical plants from the Italian companies Montedison, ENI, and Cnia Viscosa, on a compensation basis. This includes facilities for the production of polyvinyl chloride, ethylene, ammonia, kaprolaktam, and others. Since 1978 ammonia has been exported to Italy through the Black Sea port of Yuzhnyy as payment for the equipment supplied. In accordance with an agreement concluded between the USSR and the American Occidental Petroleum Corporation for cooperation in the production and deliveries of chemical fertilizers, a big plant for ammonia and carbamide is being built in Toliatti, on the Volga. Specific contracts have been concluded in the field of the chemical industry with West German companies for the production of synthetic fibers, plant protection chemicals and pharmaceuticals, petroleum refining, and others. Furthermore, cooperation between the USSR and Japan in the production of synthetic fibers will involve the processing of Soviet raw materials by Japanese plants. The finished product

wil. be delivered to the USSR and to third country markets. Joint cooperation in third countries is expanding considerably. Thus, for example, a mixed enterprise has been set up with the Italian Italianpianti Company which will specialize in the designing and building of petrochemical and other plants. One of the new contracts in this sector is for building plants for the production of insecticides in Uzbekistan, based on technology supplied by the Monsanto American company.

Let us mention among the more important contracts for industrial cooperation in the chemical industry by the other socialist countries which include those of Hungary with the Hoechst, Montedison and Schering companies for the production of plant protection chemicals; and between Poland and the Japanese companies Marubeni and Hitachi for the construction of a chemical fertilizers plant in Algeria with loans provided by a Japanese partner.

Romania has interesting experience in building mixed enterprises on its territory, including in the chemical industry. Among the first of the mixed enterprises built on Romanian territory are Rifil (1973) with the Italian firm Romalfa, and Romiprot with the Japanese Day-Nipon Company for the production of yeast.

Together with these contracts let us note the conclusion of long-term agreements for cooperation in the chemical industry particularly characteristic of USSR practice as is the case, for example, of the 10-year agreement for industrial cooperation in the heavy and chemical industries, concluded in 1977, and long-term agreements with France on economic cooperation in the chemical industry and transportation.

In the light of the basic directions issued by the 11th BCP Congress and the National Party Conference on the development of the Bulgarian chemical industry, i.e., upgrading the economic effectiveness, modernizing, and reconstructing existing production capacities, building new capacities on the basis of available raw materials, and the development of the chemical industry in accordance with global trends as well as maximum utilization of the achievements of scientific and technical progress considerable possibilities appear for the development of a number of production facilities through methods of industrial cooperation with the developed capitalist countries.

Bulgaria is developing a variety of forms of industrial cooperation in the chemical industry. The considerable amount of payments made through exports of chemicals and other goods, accounting for over 50 percent (in some cases even more) than the value of the amount of imported chemical equipment, is an achievement in the procurement of projects, installations, and others for the chemical industry, supplied by capitalist firms. This includes complete enterprises for the chemical and petrochemical industries such as, for example, installations for the production of carbamide, ethylene, and vinyl chloride, plants for high pressure

polyester fabric, installations for the production of benzene, dimethyltrephthalate, paraxylol, polypropylene, and others. Plants have been
procured for the textile processing of polyester fabric, a plant for
polynose fiber, an installation for the production of artificial raw
silk, and others. The possibility to pay for supplied equipment with
services such as, for example, transportation, and others, is of interest
in cooperating in this area.

As to the implementation of other forms of industrial cooperation in the chemical industry, let us point out that in the production field relatively simpler forms are used such as, for example, subcontract deliveries, production based on licenses and know-how, and documentation.

Outlays in convertible currency are reduced through the production or manufacturing of a number of finished chemical and pharmaceutical products. At the same time, greater opportunities are created for the application of new products in industry, the use of the achievements of some companies in this area, and so on.

Big companies such as Ciba-Geigy, Sandoz, 1C1, EN1, Hoechst, and others play an important role in Bulgaria's industrial cooperation in the chemical industry. This may be explained, on the one hand, by the strong positions they hold on international markets and their technical and scientific accomplishments, as well as the considerable investment funds at their disposal. On the other hand, some corporations have experience in international cooperation with the socialist countries as well.

Let us note among the contracts for industrial cooperation in the chemical and pharmaceutical industries those on the production of polypropylene, polyethylene, ethylene oxide, and others, and medicines and pigment preparations. Usually, the contracts are based on the active substances delivered for the preparations and raw materials, using our products as well for the finished products. They include contracts for the manufacturing of plant protection chemicals, pharmaceuticals, veterinary products, production of latex based on a license, and others. The characteristic feature of this cooperation is that joing work is being done in the production of various preparations in the pharmaceutical, lacquer, and petrochemical industries. Joint sales of some pharmaceuticals are increasing as well. Furthermore, we are cooperating with French, West German, and other companies for the production of a number of cosmetic goods in our country such as Desodaran, hair dyes, perfumes, and others.

The mixed enterprises built in the developed capitalist countries with Bulgarian participation contributes to the broadening of Bulgarian exports of chemicals. Sales of chemical and pharmaceutical products on the West German, Italian, Swiss, and other markets are largely accomplished through mixed companies.

As to the creation of mixed enterprises with foreign capital participation in our country, along with the extensive study of the matter with a view to its application in a form acceptable to our country, let us stress that it is particularly suitable in the production of chemicals.

Cooperation between Bulgarian economic organizations and companies in the developed capitalist countries is expanding further and further in building projects in third countries, including the area of the chemical industry. Bulgaria's possibilities consist of the joint construction or participation in various projects, equipment supplies, including supplies as a general contractor, providing technical assistance, and others. Such cooperation has been organized with Italian firms in the building of petrochemical combines in Arab countries--petroleum refineries in Zambia and in Libya. Bulgaria is cooperating with Austrian firms in designing and joint deliveries of installations for the production of citric acid in third countries. Furthermore, considerable possibilities are developing to build plants for chemical fertilizers in Togo, Algeria, and others. Possibilities for cooperation on third country markets appear, with the paraticipation of French companies, in building petrochemical complexes, chemical plants, and others. The level reached in the development of economic relations in the chemical industry, as well as the specific conditions offer the possibility to convert to multilateral cooperation, above all on the markets of third countries, in the chemical industry, where partners could include, in addition to Bulgarian and economic organizations from the other socialist countries, one or more Western partners. This would contribute to the good and prompt completion of the projects.

Our practical experience in concluding general agreements with chemical concerns and firms is becoming broader and richer. Most of the general agreements signed in this area are comprehensive, including engineering and other activities. Industrial cooperation contracts are already being fulfilled with some companies while specific contracts with others are to be signed. They include Hoechst, Ude, Lurgi, and BASF (FRG); Ciba-Geigy and Sandoz (Switzerland); Technipetrol, ENI and Montedison (Italy); Technip, Creusot Loire, and Christian Dior (France); ICI (Britain); AKZO (The Netherlands); Fost Alpine (Austria); Mitsui and Mitsubishi (Japan), and others. One of the new general agreements between Bulgarian economic and foreign trade organizations covering the chemical and petrochemical industries is with Gutehoffnungshutte, the West German concern.

industrial cooperation between Bulgaria and the developed capitalist countries in the chemical industry is encountering a number of difficulties characteristic, in general, of the development of new forms of economic cooperation. This includes, for example, problems arising as a result of the foreign trade policy pursued by the members of the EEC, the Western European integration group. In industrial cooperation goods produced as a result of such cooperation are taxed customs fees along

with traditional imports on the markets of the community members. Thus, customs fees for chlorine equal 11.2 percent; for ammonium nitrate, 11.2 percent; ammonium carbonate, 9.6 percent; urea, 12 percent; cosmetic preparations, 11.2 percent; medicinal drugs, 18 percent or higher, and so on. We must also take into consideration the sharp competition due also to the fact that no customs fees are levied a goods produced by the Common Market countries. This places in an a .. arse position the products of third countries, including Bulgaria. These measures were gradually introduced for the members of EAST and other countries which had signed preferential or other agreements with the EEC. Another major obstacle facing Bulgarian exports, including the exports of the products of cooperation in the chemical sector, are the quota restrictions, the system of issuing import permits, administrative formalities, and others. Let us note that in the past two to three years new forms of protectionism have become widespread in the capitalist countries. This is related to the effect of cylical and structural factors which affect chemical output as well. The main characteristic of the "new" protectionism is its stiffer limiting effect on imports compared with the previous restrictions. Thus, for example, Italy introduced quotas for chemicals. Furthermore, in 1978, an EEC commission undertook the drafting of a control system covering cooperation with the socialist members of CEMA in the petrochemical industry, with a view to "preventing any adverse effect" on the chemical industry of Common Market countries. On the other hand, in connection with the delivery of machines and equipment for the chemical industry, the loan conditions such as interest rates, repayment terms, and others--pose problems.

Furthermore, like other socialist countries, engaging in industrial cooperation in the chemical industry with big firms, our country is frequently forced to surmount the one-sided approach of the monopolies who tried to contract for more labor-intensive production facilities and artivities, and production facilities insufficiently coordinated with environmental protection requirements; in a number of cases the equipment and technology they offer do not meet the latest modern requirements; they abstain from longer-term contracts, and so on.

The practice of the Bulgarian People's Republic in the field of industrial cooperation, including the chemical industry, involves the solution of a number of domestic problems as well. They apply, above all, to the existing economic mechanism for engaging in foreign economic activities, including industrial cooperation. The arising difficulties are mainly of a planning and organizational nature. They are related to the foreign exchange support of the projects, crediting, and others.

In accordance with the new governmental decisions passed for the fuller application of the economic approach in foreign economic activities, conditions are created for the further dynamic development of the chemical industry, upgrading the competitiveness of Bulgarian chemicals on international markets, and finding new reserves for achieving greater effectiveness for foreign economic activities through the further development of industrial cooperation.

The chemical industry is appearing like a promising sector for the development of the various forms of industrial cooperation. In the future, the Bulgarian chemical industry will develop in accordance with the general global trends, with maximum utilization of the achievements of actentific and technical progress. Decisive positions in Bulgarian exports will continue to be held by the basic chemical products. Greater attention will be paid to small-tonnage chemical production. A particular role will be assigned to mastering the production of scarce chemicals. Cooperation with the capitalist countries, such as the building of new capacities for increasing the production of ethylene, polyvinyl chloride, polyethlyene, polystyrene, and others, the installation of new capacities in the petrochemical industry, and for the production of plastics, chemical fibers, and synthetic resins, plant protection chemicals, pharmaceuticals, paints and pigments, auxiliary materials for the textile and leather and fur industries, and so on, will contribute to the development of the petrochemical industry.

Specific possibilities for cooperation appear through the expansion, reconstruction, and modernization of existing capacities, the production of small-tonnage chemicals and, above all, of plant protection means, through the use of know-how for some substances, the development of the production of textile-auxiliary materials, synthetic dyes, volatile oils, binding chemicals, and so on.

Industrial cooperation in this sector may be directed toward expanding the participation of forms other than the delivery of complete equipment paid for through jointly produced goods, and the organization of mixed enterprises. Cooperation with the developing countries in the building of chemical industry projects appears particularly promising. The development of industrial cooperation in this sector in the future will be combined with the development of other forms of economic cooperation such as scientific and technical cooperation, engineering, and others. The leasing method may be used in some cases as well.

The reaching of higher economic results from industrial cooperation in this area will require the concentration of funds and resources on bigger and more central projects and production facilities. The basic criterion governing their choice should be their effectiveness. Priority should be given to promising subsectors and production lines in which Bulgaria is specializing with a view to achieving long-term participation in the international division of labor.

The development of industrial cooperation between East and West in the chemical industry will have a positive influence also in the implementation of the programs earmarked in this sector by the CEMA-member countries.

FOOTNOTES

- In 1978 the following were among the 50 biggest industrial companies in the world in terms of trade in chemical products: Hoechst (26th), ENI (22nd), BASF (31st), Bayer (27th), ICI (46th), and Montedison (49th). Furthermore, leading positions are held by Rhone Poulenc (France), which is 42nd among the 500 leading companies in merchandising, exclusing the American; Pechinet Eugene Kuhlman, 35th; Dupont, Union Carbide, Dow Chemical, and Monsanto (United States) and others. FORTUNE, 13 August 1979.
- 2. Based on data of the Economic Commission for Europe.
- 3. VNESHNAYA TORGOVLYA, No 6, 1979, p 24.
- 4. In addition to Romania, mixed enterprises are allowed in Hungary, Poland, Yugoslavia, and the Democratic Republic of Vietnam. At the beginning of 1979 the first mixed enterprise for the production of pharmaceutical goods was opened in Vietnam. EAST-WEST, 219/1979, p 2.
- 5. The customs fees have been effective as of 1 January 1979. JOURNAL OFFICIEL DES CEL (335), 1 December 1978; Supplement, 1978-1979.
- 6. BCP Central Committee and Council of Ministers Decree No 29 of 15 June 1978; Ordinance on the Specific Rules Governing the Management of Economic Organizations and Production Subunits in the Industry Sector, Council of Ministers Letter No 36 of 30 July 1979, and DV, No 71, 1979.
- "Basic Directions of the 11th BCP Congress on the Socioeconomic Development of the Bulgarian People's Republic in the Seventh Five-Year Plan (1976-1980)," P., Sofia, 1976, pp 34-35.

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GABCIKOVO NAGYMAROS DAM CONSTRUCTION DISCUSSED

Prague PLANOVANE HOSPODARSTVI in Slovak No 4, 1980 pp 22-29

[Article by Eng Vladimir Margetin, Minister of Forestry and Water Management]

[Text] Significance and Problems of the Project

The Danube River and its tributaries have always played and still do play an important role in the socioeconomic development, in the formation of the living environment and the history of the nations located in their basin. Along the rivers there sprang up settlements and pathways following the flow of the rivers became arteries connecting the developing settlements and territories. Today the Danube forms one of the commonly shared bases of economic development for the nations located along its banks and represents for the Danubian countries a commonly shared resource in regards to navigation, power generation, water supply and recreation. Optimum technoeconomical utilization of natural resources coupled with effective measures against any detrimental effects provide a link of common interest for neighboring countries and compell them to implement their economic development according to an overall, complex plan acceptable to each of the interested parties.

The distance between the Danube's source and its estuary on the Black Sea is 2,900 kilometers, making it the second longest European river. It passes through eight countries and its basin, mesuring 817,800 square kilometers, houses 76 million inhabitants. On our country's territory it squeezes its way through the cliffs of the Lower Carpathian Mountains near Devin at river kilometer 1,880 and for a length of 7.5 kilometers forms the Czechoslovak-Austrian border.

Further, up to river kilometer 1,850, it flows through Czechoslovak territory for 22.5 kilometers. From that point up to river kilometer 1,708, i.e., for a length of 142 kilometers, it forms the Czechoslovak-Hungarian state boundary and leaves our territory through a narrow valley formed by the Borzsony and Pilis ranges. Between those two mountain passes, where entering and leaving the territory of our state, it formed an extensive level area, practically the first large lowland in its course composed of

Quarternary deposits called the Danubian Lowland. The Danube forms a natural axis of this lowland and from its point of entry it flows for some 100 kilometers along the top of a huge mound formed by its own fluvial accumulations which lies higher than the wide open neighboring plain. In this area a break in the levee at any point poses the danger of flooding a part or all of Zitny Island. This fluvial deposit mound is delineated in the north by the Little Danube and in the south on Hungarian territory by the Moson arm of the Danube. The upper part of the Danubian Lowland contains a large number of active arms forming an intertwined branched out system bearing witness to the constantly changing tendencies in the development of the Danube's channel. Currently, particularly during floods, due to forceful movement of bedloads, the Danube constantly changes its channel causing systematic technical problems with its maintenance and stabilization requiring great expense.

Levees have been erected all along the course of the Danube on the territory of our state, and the system is constantly being supplemented and reinforced. Protective levees along the Danube and its tributaries protect more than 200,000 hectares of land on the Czechoslovak side, and some 40,000 on the Hungarian side.

The flow of the Danube can be divided into two clearly distinguishable levels. From the Danube's entry into the lowlands up to river kilometer 1,810 the river gradient is 35 to 40 centimeters per kilometer, while in the lower part, where the flux is formed by a network of largely already dead and silted branches and marshes, the river gradient becomes a mere 6 to 8 centimeters per kilometer.

The Danube touches upon or flows through the territory of our state over a total length of 172 kilometers. Of that length, it flows through Czechoslovak territory for only 22.5 kilometers. In other sections it forms the state border with Austria and Hungary. In sections where it forms the state border, all modifications of the Danube channel must be dealt with in cooperation with and participation of the relevant countries. This also applies in full measure to dealing with the plan for complex utilization of the Danube, which would be incomplete without active participation by Hungary and Austria.

The Danubian Lowland offers excellent natural and economic conditions for a rapid and effective development of the economy. Primarily, it is the Danube itself that forms an enormous and inexhaustible source of power and a constant supply of water which can meet any requirements of industrial plants dependent on water. The Danubian navigational route epresents an important international transportation link. The Danube contains billions of cubic meters of good clear water.

Of no lesser importance are rich deposits of quality sand and pebble materials. The beneficial climatic as well as soil conditions in this warmest part of Slovakia with the longest growing season favor the development of intensive agriculture with highly productive irrigation farming.

These favorable natural conditions have not been adequately used to advantage because of the disarray in the water system. The key to adequate utilization of favorable natural conditions is organization, management and control of the water system in this region, i.e., protecting low-lying areas against flooding by the Danube and its tributaries and against subsoil soaking by subterranean waters. It constitutes a complex problem and a formidable task, because the Danube is a mighty river flowing in sand and pebble deposits of monumental volume, permeability and most varied accumulations that make any technical modification very difficult and complicated. At the present the Danube poses the potential danger of summer and winter floods which represent a permanent menace to Bratislava and the entire Danubian Lowland.

During extremely severe floods in the past, Southwestern Slovakia was inundated a number of times due to the breakdown of levees and the welling up of subterranean waters. Ever since the first recorded flood, which dates back to 1526, these disasters have been recurring at shorter or longer intervals. We all vividly recall the flood of 1954 when the raging water caused damage estimated at Kcs 400 million.

Even fore devasting was the flood of 1965, when the Danube's levees broke down in two places, near Patince and near Cicov. Water which spilled from the broken levees into the adjacent areas flooded 65,000 hectares of land, and subterranean waters which welled up above the terrain flooded another 40,000. To avail ourselves of the natural conditions offered by this area we first must remove the risk of floods.

Endangered areas can be protected by implementing single-purpose devices that would tend to lower or completely eliminate the detrimental effects of Danube's flood waters, or the problem can be dealt with within the framework of a complex utilization of the Danube, the latter approach being most effective. Such a complex approach, i.e., the multipurpose utilization of the Danube, will first of all protect the entire area adjacent to the Danube against floods and welling up of subterranean waters, it will make use of the Danube's power generation potential, and provide a deep water route with a navigational depth of about 3.6-4.0 meters between Bratislava and Nagymaros, improve local conditions for the development and growth of industry, and provide for agriculture the prerequisites for intensive development, as it will become possible to farm all agricultural soil, including soils which have been subject to floods or welling up of subterranean waters, or, as the case may be, suffered from lack of water in periods of draught. Such complex utilization of the Danube sector within the CSSR will be provided by the planned and currently already implemented construction of water projects along the Danube.

Systematic efforts for utilization of the Danube were begun in our country in 1951 with the acceptance of the principle to provide for complex utilization of the entire Czechoslovak sector of the Danube, from the mouth of the Morava river to the mouth of the Ipl river, primarily for power generation, further for navigation and for other water management uses in a way that would eventually facilitate gradual implementation.

In the first few years the studies extended to potential solutions of the plan for utilization of the Czechoslovak-Hungarian sector of the Danube, and only in 1955 did the studies come to include the Czechoslovak-Austrian sector. The results of these studies formed the documentary basis for the overall plan for the utilization of the Danube from Devin to the Black Sea worked out within the framework of CEMA and in cooperation with the Soviet Union, which was approved by governmental delegations in 1963.

Then came a period of comparing the various alternative approaches up to the so-called "competitive alternative" which was completed in 1969. An updated alternative of the derivative approach was adopted by the Presidium of the CSSR government in the form of an investment task in January 1974. Subsequently, on 16 September 1977 in Budapest came the signing of an interstate pact on the joint construction of a system of water projects on the Danube at Gabcikovo-Nagymaros.

The derivative approach to the Czechoslovak-Hungarian sector of the Danube is based on using the abrupt change in the gradient of the channel. The system consists of: waterwork Gabcikovo with a dam below Bratislava, a feeding canal, electric power plant with flotation chambers, a drainage canal and the waterwork Nagymaros. The essence of the concept is construction of a dam below Bratislava which would equalize the daily rate of flow of the Danube, its backwater design resembling that of the Wolfsthal waterwork. A 17-kilometer derivative canal up to the power plant Gabcikovo will be built on Czechoslovak territory from the dam outside the Danube channel. From the power plant it is proposed to build an approximately 8.2-kilometer drainage canal up to the channel of the Danube. The waterwork Nagymaros forms a river grade with backwater up to Gabcikovo and serves for controlling the flow rate during peak operation of the Gabcikovo hydroelectric power plant.

This complex solution forms a unified integrated system with a number of other requisite installations in the system for protecting the area against seepage, facilitating navigation, generating electric power, etc.

Data Characterizing the Project

River	Grade
Gabcikovo	Nagymaros
13,000	10,000
10,600	8,700
8,750	7,650
570	590
10,400	8,180
1,010	1,286
1,810	2,248
3,298	3,837
	Gabcikovo 13,000 10,600 8,750 570 10,400 1,010 1,810

Data (cont'd)

Characteristic Water Levels	Gabc 1 kovo		Nagymaros
maximum operations level headwater	131.20 23.27		107.83 9.43
Characteristic storage Data			
Haximum width of reservoir			
(kilometara)	4.5		2.0
Reservoir area (square kilometers	60.1		68.0
Total volume (million cubic meter Effective volume	200.0		170.0
(million cubic meter	49.0		25.0
Characteristic Power Data			
Installed capacity (megawatts) Electric power gene-ation in case of peak operation (gigawatt hours			165.0
per year) in an average year	2,650.0		1,025.0
Average annual utilization	3,775.0		6,740.0
Characteristic Navigation Data			
Depth of navigation path (in mete		3.6-4.0	
Minimum width of navigation path		2000	
Minimum radius of navigation curv	me (meters)	1,000	
Maximum Depth of Flotation Chambe	rs		
Under the dam (meters)		4.5	
Displacement between levels (mote	re)	10.0	
Average filling and drainage time	(minutes)	12-14	

To enable the reader to visualize some of the technical problems that had to be coped with in the preparatory stage, let us outline several problem areas.

Protection of the Area Against Seepage from High Dam and Feed Canal Water Levels

The permeability of pebble layers, which are found below the entire area under construction, their variable horizontal and vertical composition, tendency to suffosion (which also was the cause of the devastating floods in 1965), call on the one hand for devising a system of elements for sealing the dam and feed canal walls, and for seepage canals, wells, sluice gates and pumping stations on the other. By a combination of these elements it is planned to provide stability for the subsoils under installations,

structural stability and functional reliability of overland structures and stabilized seepage into Zitny Island at a controlled rate. Optimum solution of the used elements will have a great effect on the rate of implementation of the project, on the amount of investment costs and on effective utilization of the area after completion. Solutions to these problems were provided jointly by Czechoslovak and Bungarian specialists from various research institutes, institutions and planning and design organizations.

Seismicity of the Area

The Danube Basin is tectonically constituted as a huge depression between the mega-anticlines of the Lover Carpathian Mountains and the Oligocome of the Kovacske Hills. Currently, the entire basin is slowly sinking. Inside the basin are tectonic lines covered by an immense series of sedimentary strata. No faults appear in the Quarternary strata, or they cannot be discerned due to the slow sinking and continuous deposition of sediments. Seismic zones and inclines were determined along the Danube for design purposes of installations which then served as the basis for the requisite computations. These problems have been dealt with a number of times by experts, primarily from the USSR. A realistic evaluation of the situation and determination of safety coefficients is of key importance for the extent of the projects, design and construction of installations, and thus also for the overall investment costs.

Laying Foundations of Key Installations under the Geological Conditions of the Danube Basin

The stretch Dunakiliti--Hrusov, the electric power plant, the flotation chambers in Gabcikov as well as the turnout under the feed canal will have their foundations laid deep below the level of subterranean water, which, under the given conditions is proposed to be accomplished by constructing artificial troughs. This proposal translates into building underground walls along the perimeter of the future foundation open pits and sealing the bottom of the entire perimeter so as to prevent breakdowns in the subsoil through uplift after digging and to minimize seepage into the foundation pit.

The complexity of the solution is constituted by the fact that the walls of the trough built in laminar fashion must be continuously linked, using materials that provide the requisite degree of impermeability. At wall depths up to 50 meters and approximate width of 60 centimeters, it is a formidable task. Similarly, achieving a continuous bottom for the trough by injection at such depth and dimensions ranks it currently among the world's unique achievements. For its implementation the licened Solutanche company procured specially built machinery and equipment from abroai.

Making the Project Compatible With the Natural Environment

The project directly affects an area measuring 13,200 hectares, but its effects will gradually extend to a wider area. In addition to marsh forests, the project will distinctly affect the water system of the area,

its agriculture, transportation, settlement, recreation, unique natural formations, fauna, flora, historical monuments and archeological digs.

A biological project was worked out for this area to make the interests of the technical project compatible with economic utilization of the adjacent areas, which on the basis of an analysis of the current state and the progress of the project, proposes measures for minimizing negative effects on this natural system and on its modifications during and after completion of the project. It marked the first time that such complexity of approaches was used for such a vast area and is very instructive for subsequent planning entailing large areas.

Flotation Chamber Design

The dimensions of the flotation chambers (length 275 meters, width 34 meters, minimum depth above threshold 4.5 meters, height above bottom 30.1 meters), special gate design, requirements on the rate of filling and drainage together with the foundations of the installation are an engineering solution documenting the high qualifications of researchers and designers.

It would be possible to cite further examples which called for highly creative approach by both basic and applied research personnel, personnel from institutes of higher learning, research groups, design, planning and investment organizations. It is to be regretted that between the start of preparatory work and the initial implementation of the project there occurred a turnover of an entire generation of research, design, planning and investment capacities and the capacities of once specialized water management construction organizations became dispersed for the pursuit of other goals.

Upon ratification of the project task Gabcikovo-Nagymaros "System of Water Projects on the Danube" both contract parties concentrated on detailing the joint project called for by the contract. It was complicated and exacting work, because differing technical and legal norms had to be reconciled, technological processes had to be streamlined, taxing technical problems had to be dealt with, the financial terms of the construction costs had to be agreed upon, state borders had to be adjusted, etc. Other new categories had to be agreed upon which have never been encountered in investment run-up before, such as "construction budget in rubles," division of installations into mutual national and purely national ownership of two socialist countries, etc.

Cooperation with the Hungarian side was provided by an expanded joint technical committee appointed by the government of the CSSR and headed by an authorized representative of the government. This committee was composed of representatives of individual ministries in parity representation between the Czechoslovak and Hungarian side. For individual stages of the preparatory work the committee appointed working groups of experts who worked according to a plan approved by the committee. Overall cooperation with the Hungarian People's Republic is coordinated by the "Czechoslovak-Hungarian Combined Committee for Economic and Technoscientific Cooperation."

On 16 September 1977, in addition to the "Pact regarding the Development...", came also the signing of an "Agreement between the Government of the Czechoslovak Secialist Republic and the Government of the Hungarian People's Republic regarding Mutual Assistance in the Construction of the System of Water Projects Gabcikovo-Nagymaros."

The agreement specifies the key terms for implementation, an overall harmonogram of the construction was approved and negotiations were concluded regarding assistance by the CSSR to the Hungarian side. Carrying out of the agreement, coordination and control of efforts connected with implementation of joint investments and carrying out the tasks resulting from operation of the system of water projects is provided by authorized representatives of both governments.

As the greater part of the installations in the "System" are located on Czechoslovak territory and operations, according to the specifications of the contract, are to be equally shared, the Hungarian side must build some installations on our territory. This concerns particularly the righthand side of the dam Hrusov-Dunakiliti, the drainage canal of the hydroelectric power plant Gabcikovo, and protective measures in the area of the Lower Ipel and Lower Hron rivers. This entails the need for taking a number of measures in the area of design preparation, procurement of investments and the construction itself. The Hungarian side will launch preliminary operations on our territory in the course of the current year and start actual work on the project in 1981.

Great assistance in preparing and implementing the system of water projects on the Danube is being rendered by the Soviet Union. A number of major consultations with Soviet experts have taken place since 1956 in regards to the overall concept of utilization, as well as in regards to specific problems of technical approaches and construction. The result of a further deepening of cooperation with the USSR is an agreement regarding the delivery of 8-HP turbines and generators with auxiliary equipment for the hydroelectric power plant Gabcikovo.

Construction

At the outset of 1978, preparatory work began on the main installations of the "System of Water Projects Gabcikovo-Nagymaros." Preparatory work on the installations dam Hrusov-Dunkiliti, the feed canal, river grade Gabcikovo and the drainage canal represents acquisition of building sites, engineering networks, approach routes, power and water sou ces, telephone connections, sluice installation at the fourth kilometer of the feed canal, verification sector for laying foundations for the river grade Gabcikovo and digging of the drainage canal.

Preparatory construction work as well as the construction itself were consigned to the prime contractor, the Hydrostav Bratislava, which has its own subcontractors: Vahostav, Doprastav, Railroad Construction and Overland Construction Nitra. Technological supplies are provided by CKD Blansko and Sigma Lutin. Preparatory work is scheduled to continue till mid-1981.

The part of the "Gabcikovo-Nagymaros System of Water Projects" which is to be built by the Czechoslovak side consists of 1,897 installations. Of that number, 1,406 are investment property and 491 entail special equipment for the site. From the given number, 1,174 installations accrue to the water project Gabcikovo and 723 installations, 350 are to be erected during the first stage of construction.

Meeting the tasks of the last year of the Sixth Five-Year Plan, when the second stage of the construction of the System of Water Projects Gabcikovo-Nagymaros is to be launched, expanding the extent of the first stage by some 400 additional installations, will require a concentrated effort by all participants in the project. A work session of the participants in the project adopted a joint socialist pledge for carrying out the tasks in accordance with the interstate pact so as to implement the planned volumes of construction operations in 1980 to include at least:

- 11 million cubic meters of excavations;
- 5.3 million cubic meters of secondary excavations;
- 3.0 million cubic meters of fills;
- 74,000 square meters of underground sealing walls;
- 255,000 cubic meters of injection sealed foundations.

Supply of construction equipment, machinery and transportation means is the decisive criterion for continuous progress of construction operations and for meeting accepted deadlines. In spite of the rulings of the State Planning Committee and the binding nature of the project, deliveries lag behind agreed upon deadlines, which is beginning to adversely affect construction of installations located on the critical path of the project's network graph.

Even though the conclusions of state experts working on the projected task did aptly point out selected problems and the estimated trend in capital construction for the years of the water projects on the Danube, today, after eight years, we can state that the overall trend in capital construction and requirements of suppliers have by far exceeded the indices specified in this article and those of the subsequent resolution of the Presidium of the Government of the CSSR No 25/74. With regard to the enormity of the project in space, time, technical and economic conditions, it is difficult today to reconcile the project's documentation with the decree 163/73 in effect.

The complexity and excessive concentration on minute details in devising documentation for the project with several years lead-time, together with the complicated system of budgeting and the supplier-consumer relations (made worse by combination with supplies from abroad) leads us, as investors, on a collision course with the suppliers in implementing the

project, making changes in technological processes, substitutions in materials and using price lists that were not designed for comparable volumes of operations and the equipment used in them.

Missing basic data for completing the project documentation for the hydroelectric power plant and the flotation chambers in Gabcikovo delay work on initial projects and, thus, also determination of investment costs according to Czechoslovak regulations beyond terms that the investor must closely follow in preparation for the Seventh Five-Year Plan to determine the requisite amounts of investments and to plan construction and technological capacities.

The tasks and obligations of all participants in the project have been assigned. The activity developed by our workers in carrying out the resolutions of the 14th plenary session of the CPCZ Central Committee ought to find its reflection in carrying out the tasks for the binding task of the state plan, i.e., construction of the "Gabcikovo-Nagymaros System of Water Projects on the Danube." It is a task which is not only of technical and economic significance, but has also great political, international significance.

Creation of joint ownership by two socialist states, with active cooperation from other members of the socialist camp is becoming a foretoken of the advancing integration of CEMA member countries, and that obligates us to exert all our efforts for the successful completion of this task.

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BRIEFS

USSR-CSSR FERTILIZER TRADE--Imports of mineral fertilizers from the USSR by Czechoslovakia via the Cierna nad Tisou border crossing have reached 318,102 tons since the beginning of 1980. Timely deliveries of the fertilizers have exceeded by 25,792 tons the expected tonnage due to arrive by this time. [Bratislava ROLNICKE NOVINY in Slovak 16 Jun 80 p 1]

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DEVELOPMENT OF NATIONAL ECONOMY DURING FIRST QUARTER OF 1980

Sofia STATISTICHESKI IZVESTIYA in Bulgarian No 1, 1980 pp III-VI

[Text] General Remarks

The present publication comes out once every quarter and contains annual, quarterly and monthly statistical data on the basic indicators characterizing the socioeconomic development of the Bulgarian People's Republic.

The statistical information program covers 12 sections:

- I. Basic Data on the Development of the National Economy
- II. Population
- III. Population Living Standard
 - IV. Labor
 - V. Capital Investment
- VI. Industry
- VII. Agriculture
- VIII. Transportation
 - 1X. Communications
 - X. Internal Trade and Prices
 - XI. Tourism
 - XII. Foreign Trade

The data for all sectors are based on their organizational structure and the structure of the enterprises for the corresponding period.

The value indicators are based on prices for the respective year. The annual indicators of industrial and agricultural output, capital investments, trade and prices, foreign trade, and the monthly industrial production indicators are computed on the basis of comparable prices. Annual indicators are computed on the basis of 1970 figures while those for a period of less than one year, on the basis of the corresponding period of the preceding year.

Data on household monetary income, expenditures, and consumption are based on the selective observation of household budgets.

Data for the current and the preceding year are preliminary and subject to specification in subsequent issues.

Interpretation of Abbreviations and Symbols

- 0 Value smaller than one-half of the respectively used unit
- - No case
- . No data
- PAK Industrial-agrarian complex
- APK Agroindustrial complex

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Development of the National Economy in the First Quarter of 1980

The trend toward stable and high rates of development of the national economy continued in the first quarter of 1980, clearly seen from the results of all national economic sectors.

Industry

Compared with the corresponding period in 1979 the volume of overall output of the state and cooperative industry rose 4.1 percent. The highest production increases were achieved by the enterprises in the chemical and rubber industries, 11 percent; production of electric and thermal power, 9.9 percent; glassware and porcelain industry, 9.4 percent; machine building and metal processing industry, 7.3 percent, and others. Territorially, the highest growth rates were achieved by the following okrugs: Razgrad, Sliven, Shumen, Khaskovo, Tolbukhin, Ruse, Vidin, Blagoevgrad, and others.

The production of goods of particular importance to the national economy rose considerably.

Compared with the respective period in 1979 production of electric power rose 9.2 percent; coal, 6.5 percent; rolled ferrous metals, 1.7 percent, and others.

Ferrous metallurgy produced 381,700 tons of cast iron and ferroalloys, and 612,600 tons of steel.

During the quarter the additional output of the machine building and metal processing industry was the following: electric motors, 13.4 percent; power transformers, 17.1 percent; lathes, 37.0 percent; tractors, 7.4 percent; fork lift trucks, 18.9 percent; electric hoists, 3.7 percent; television sets, 12.1 percent; and household refrigerators, 26.5 percent.

The production of basic chemical industry products rose as follows: nitrogen fertilizers, 16.2 percent; calcinated soda, 4.1 percent; caustic soda, 43.5 percent.

The cellulose-paper industry continued to develop at a fast pace, as a result of which production rose 3.6 percent for paper and 4.1 percent for cardboard.

Compared with the first quarter of 1979 the textile industry output rose 4.3 percent. Output rose by 8.9 percent for woolen fabrics and 7.9 percent for silk fabrics.

The output of the food industry rose. Between January and March 1980 additional output totaled 14.8 percent canned fruits, 32.2 percent vegetal cooking oils, and others.

Compared with the first quarter of 1979 labor productivity per industrial-production worker in the state enterprises, based on overall industrial output, rose 2.6 percent. The highest increase was shown by the chemical, rubber, glassware, porcelain, machine building, metal processing, timber extraction, and timber processing industries.

Agriculture

Despite poor weather conditions, thanks to the increased efforts of the agricultural workers, better results were achieved in the past quarter compared with the first quarter of 1979. The number of cattle rose by nearly 19,000; hogs, by over 20,000; and of poultry, over 400,000.

The productivity of the livestock in agricultural organizations and branches rose. Compared with the same period of 1979 average milking per fodder-fed cow in the first quarter rose 5.6 percent.

Compared with January-March 1979 the following additional quantities were produced: milk, 9,464,000 liters or 2.7 percent, including commils, 14,056,000 [sic] liters, or 4.6 percent; the production of eggs by agricultural organizations and their branches rose by 4.9 million (1.9 percent).

Compared with the same period in 1979, additional purchases from all farm categories in January-March were as follows: large-horned cattle, 4.3 percent; milk, 0.6 percent; and eggs, 4.8 percent.

Capital Investments

Compared with the same period of 1979 capital investments exceeded 930 million leva, or an increase of 26.9 percent. Most of the funds were invested in material production sectors, industry in particular.

The process of modernization and reconstruction of existing production capacities continued. By the end of March 336 million leva were invested compared with 257 million leva in the corresponding period of 1979, or a total of 36.1 percent of the overall volume of capital investments.

Between January and March 1980 productive capital worth 456 million leva was installed. Sectorially, the highest shares went to industry, agriculture, transportation, and the housing-communal economy.

Transportation

Compared with the same period of 1979, between January and March the public transportation system carried 5.1 percent more passengers.

Labor productivity per individual rose as follows: railroad transportation, 24.5 percent; automotive transportation, 8.0 percent; and maritime transportation, 2.5 percent.

Communications

Compared with the same period in 1979 income from communications services rose 15.1 percent or 10,168,000 leva.

Labor productivity in communications rose 9.8 percent.

Trade

In the first quarter of 1980 retail sales through the retail trade network and public catering institutions totaled 2,627,300,000 leva.

Compared with the same period in 1979 sales of comestible and non-comestible products such as rice, vegetable cooking oils, sugar and confectionary goods, milk and butter, eggs, preserves, jellies, jams, lemons, oranges, woolen and silk fabrics, clothing, upper knitted goods and underwear, furniture, radio receivers and television sets, household refrigerators, and others, rose.

Our foreign trade relations developed favorably, as a result of which foreign trade totaled 3.7 billion foreign exchange leva or 13.8 percent above the same period in 1979. Exports rose 16.2 percent and imports rose 11.2 percent.

The trend toward improving the export structure continued. In the first quarter of 1980 the share of machines and equipment for industrial purposes, fuels, mineral raw materials, metals, chemicals, fertilizers, and rubber reached 62.7 percent of the total exports. Compared with the first quarter of 1979 additional quantities of the following goods were exported: electronic calculators, forklift trucks, typewriters, ships and ship equipment, cacinated soda, nitrogen fertilizers, oriental tobacco, eggs, sterilized canned vegetables, stewed fruits, and others.

Increased quantities of fuels, mineral raw materials, and metals were imported. Compared with the January-March 1979 period there were increased imports of metal-cutting machines, steam and hydraulic electric power plants, coke, pig iron, steel sheets, wool, watches, and others.

Living Standard

The positive results achieved in the first quarter created the necessary prerequisites for raising the living standard of the working people. The average monthly wage of workers and employees in industry reached 180 leva. The wages of construction workers were higher. The results of the first quarter show a substantial improvement in the work of the labor collectives in the Bulgarian People's Republic. This is a prerequisite for the implementation of the annual production tasks.

5003 CSO: 2200

POLITBURO MEMBER DWELLS ON NEW ECONOMIC APPROACH

Softa NOVO VREME in Bulgarian No 4, 1980 pp 5-19

[Article by Todor Bozhinov, BCP Central Committee Polithuro member and first deputy chairman of the Council of Ministers: "For the Systematic and Full Application of the Economic Approach in the National Economy"]

[Text] 1.

The Bulgarian Communist Party has always paid great attention to improving national economic management as an important factor in the all-round upsurge of the economy and the steadfast improvement of the people's living standard.

Improving management is a continuing process and a striving toward achieving the fullest possible consistency with the requirements formulated by objective economic laws and scientific and technical progress, and the need for the ever more extensive involvement of the working people in management. On the basis of the Marxist-Leninist theory of social management, Comrade Todor Zhivkov emphasized that, "The task in party and state management is to be accurately familiar with these factors and take them maximally into consideration, take promptly into consideration changes occurring in the objective requirements and development conditions, and make corresponding lesser or bigger changes in the management system."

The need for management reconstruction with a view to the fullest possible utilization of ommodity-monetary relations and the economic levers related to them at the stage of building a mature socialist society is dictated by internal and external factors influencing the country's development.

In accordance with the party's program of "developing production forces at a high and stable pace, and continuing economic intensification," in the past 10 years the scale of public production in our country rose considerably. In 1979 the national income totaled 17,368,000,000 leva, compared with 10,527,000,000 in 1970, representing an average annual growth of 7.1 percent. This growth was achieved mainly through social

labor productivity and represents a considerable success in the implementation of the party's course of comprehensive economic intensification. Our country's productive capital rose from 21,212,000,000 leva in 1970 to 48,803,000,000 leva.

Substantial structural changes occurred in the economy, characterized by the accelerated development of sectors considered the carriers of technical progress. Machine building and metal processing increased their output 193 percent, the system of the Ministry of Electronics and Electrical Engineering increased its output 397 percent, while the output of the chemical industry rose 138 percent. As a result of the progressive structural changes the share of industry in the creative national income rose from 35.3 percent in 1970 to 60 percent in 1979, while the ratio between industrial and agricultural output changed from 80:20 to 83:17. Within the same period expenditures for science nearly doubled.

The objective processes of production specialization and concentration developed along with the tempestuous growth of production forces. Intrasectorial and intersectorial production-economic relations because more complex.

As a result of the systematic and consistent effect of these objective factors which lead the development of the country's economy along the tracks of comprehensive intensification and acceleration of scientific and technical progress, national economic management has become steadily more complex. Traditional management ways and means which include excessive centralization and administration, a lowered role of indicators characterizing end results, and absence of planned reserves, are becoming ever more ineffective. They hold back the development of the economy and prevent the maximum utilization of the tremendous production-economic potential.

The internal factors which call for the reconstruction of management on an economic basis require the development of effective economic incentives and economic coercion for energizing the subjective factor—the development of economic initiative and of the creativity of millions of working people and of the struggle for improving the socialist organization of labor from the individual work place, brigade, shop, enterprise, and economic organization to the ministry.

The main objective which has been established as a programmatic stipulation by our party is to develop the type of economy which will be able to insure a steady improvement of the living standard of the people and meet their requirements ever more completely. In our country, wages are one of the basic indicators of the enhancement of living standards. At the same time, however, today the main question is whether or not wages are rising on an economically substantiated basis, whether or not they are entirely backed by commodities, what is the growth of public funds, and what is the level reached in public production expenditures. Consequently, raising the economic substantiation of the living standard calls

for improving the distribution mechanism, economic incentives, and economic coercion.

The need for the reorganization of management on an economic basis is substantiated by external factors as well. The open nature of our economy (over 75 percent of the national income goes through the area of foreign trade) calls for taking into consideration changes in world markets and for steadily upgrading the effectiveness of foreign economic relations, taking into consideration the consequences of the intensified energy and raw material crisis, the uneven development of the capitalist countries, inflation, and others. The main aspect of our participation in the international division of labor is upgrading the competitiveness of our commodity output and meeting the requirement that its outlays be kept within the framework of international crisis while its quality meet the international standards.

Having studied the internal and external factors determining the tasks of our economic and social development for the next 5 to 10 years, the party's Central Committee substantiated the ripe objective need for a new economic approach which Comrade T. Zhivkov defined in his 30 January 1980 speech as an "overall system of economic ways and means of influence and control and forms of organization. This system comprehensively enempasses planning, distribution, and management."

The new elements approach for the implementation of the party's economic strategy of highly effective development of the national economic complex and, in this basis, insuring the prosperity and comprehensive development of all members of our society, embodies the talent, innovative spirit, and scope of Comrade Todor Zhivkov, the leader of the party and the state. Under his personal guidance a tremendous amount of work was dane by the party. A broad circle of scientists, specialists, managers, leading workers, and innovators from various national economic sectors participated in the discussin of the basic stipulations of the economic approach. On the suggestion of the Politburo the BCP Central Committee passed a decision on improving the management of agricultural production and applying the new economic approach and new economic mechanism in all economic and social activities of the national economy.

For over one year the new economic mechanism, as the core and main manifestation of the economic approach, has been applied in agriculture and the land industry. At the end of last year it was applied in all industrial production sectors and, starting with this year, in construction, transportation, material and technical supplies, and trade, i.e., in virtually all material production sectors and activities. With the completion of the work on norming in the nonmaterial area (health care, education, culture, and others), practically the entire national economy will be based on the new economic mechanism.

The economic approach and the new economic mechanism have exceptionally important theoretical, political, economic, social, and ideological aspects.

The theoretical contribution to the Markist-Leninist theory of social management at the stage of building mature socialism is expressed in the systematic application and further development of the Leninist principle of democratic centralism in national economic management; the systematic utilization of the possibilities offered by commodity-monetary relations and by economic levers in strengthening the socialist system; and the further development of production relations based on the rapprochement between the two forms of ownership.

The political aspect is expressed in the conversion of the economic approach into the main means for achieving the political objectives earmarked in the party's program.

The economic aspect is expressed in the conversion of the economic approach into the principal means for comprehensive economic intensification, and for upgrading the effectiveness and competitiveness of our commodity output based on the self-support of the individual economic organizations and their branches. The slogan of high effectiveness and high quality acquires a new meaning: improving the socialist organization of the work with a view to reaching the peaks of scientific and technical accomplishments.

The social aspect is manifested in the increased role and significance of labor collectives in national economic management through the new forms of socio-state unions and associations based on the principles of voluntary participation, electivity, and unification on an economic basis. The work of the economic councils and economic committees in organizations and enterprises gains a new meaning and acquires broader rights and obligations, and new criteria. On the other hand, the improvement of the settlement systems as a unified social and economic organism rallies the efforts for the creation of identical living conditions in all settlements, uniform services, even enhancement of living standards, and comprehensive improvement of social conditions in accordance with obtained economic results.

The ideological aspect is manifested in the fact that, participating even more directly in the advancement of the socialist organization of labor and national economic management, the working people are raised in the spirit of a new attitude toward labor, highly conscientious labor and technological discipline, concern for the protection of socialist property, and a feeling of true ownership. The new qualities of comprehensively developed socialist individuals are shaped.

The economic approach and the new economic mechanism are the result and logical consequence of the party's long systematic efforts to improve economic management. They would have been impossible without the tremendous work accomplished after the 11th party congress. Above all, these are essentially new stipulations governing improvements of the socialist organization of labor representing the comprehensive and dialectical unit of the free elements of the labor process, covering all realms and activities, all reproduction stages, and all economic levels; improvements in plan management, based on engineering projects, synchronization between planning work in the center with planning "from below;" a system of practical measures insuring the application of the socialist principle based on the quantity and quality of labor in the payment of wages; the expansion of the rights and upgrading the responsibilities of economic organizations; the new stipulation regarding monopoly on foreign trade and of individual commodity producers; organization of direct relations between producers and the domestic and international markets. and others.

The creation of the new state-public form of management of the national agroindustrial complex, and improvements in the territorial and settlement structure created a favorable environment for the application of the economic approach and the economic mechanism.

The main and basic features of the new economic mechanism are the conversion of the economic organizations to factual self-support and extending it, through the internal cost accounting system, to each subunit engaged in production, engineering-application, procurement-marketing, and trade activities, and to each brigade and individual worker.

This means that the economic organizations will have to cover all their outlays, including financing the modernization and expansion of the production process, out of their own income, setting aside a certain percentage for meeting national requirements.

Self-support as the economic content of cost accounting was described by K. Marx in substantiating the principles governing the distribution of the overall social product. K. Harx proved that as a result of the common ownership of labor objects and means, the socialist society can use only part of the overall social product for consumption. It consists of the remainder after deducting the necessary costs for the restoration of the used productive capital and for expanding the production process, for a reserve in the case of natural disasters, and for social funds such as the maintenance of the state and management apparatus, schools, health care, and so on.

These principles governing the forming and distribution of the overall social product under socialism were further developed by V. I. Lenin who discovered the familiar formula of self-support and emphasized that each enterprise should be self-supporting. "Trusts and enterprises are

based on cost accounting precisely for the sake of being responsible themselves and entirely so for the profitability of their enterprises."

The application of the Markist-Leninist principles of distribution under the conditions of the economic approach and the new economic mechanism put things in their proper places. The possibilities which existed in the previous systems governing the formation and distribution of income were eliminated, such as allocating funds for consumption (wages, social and cultural measures, and financing modernization, reconstruction, and expansion), without guaranteeing funds for the state. The new organization of self-supporting of each activity insures, above all, payments to society while wages are residual and based on results. This formulation is based on the fact that the interest of the individual, the collective, and society are identical. The main feature of the new system for income distribution is the fact that the implementation of the requirement of maximum income with minimum outlays in the production of a unit of goods in demand, with a secure market and with given consumer qualities and value, meets the interests of both the collectives which acquire more funds in the residual wage fund and society.

Which are the main levers which activate this principle?

First: The requirement of a factual rather than indirect profitability of any economic activity. In practical terms this means the elimination of subsidies, seeking the optimum combination of the three main elements of the production process—labor, and labor objects and means, guaranteeing the most effective utilization of machines and equipment, accelerating the application of the achievements of scientific and technical progress, upgrading the quality of output, and insuring the economical utilization of raw materials, materials, fuels, energy, and financial and foreign exchange resources. On this basis real conditions are created for the systematic application of the socialist principles of material and moral incentives to the working people based on their factual contribution to the creation of the material and spiritual values of society.

Under the conditions of the new economic mechanism subsidies will be the exception and will be granted only for goods approved on the basis of mandatory state tasks and aimed at satisfying particularly important needs. Bonuses or supplements to prices, representing such subsidies, will be temporary. They will be based on engineering plans and programs for upgrading the effectiveness of such goods and for the elimination of subsidies within a stipulated time.

Second: With the new system for the formation and distribution of income relations with the budget are organized on a normative basis which guarantees that the interests of the collectives and society are identical.

The economic nature of the adopted system for general income taxation is to attimulate and create economic coercion for the fullest possible utilization of labor objects and means. The adopted base for general income taxation makes it possible to differentiate among payments to the budget, allowing economic organizations with a low capital-labor ratio to make relatively lesser payments and secure possibilities for the accelerated modernization and reconstruction of the production process with a view to lowering the share of manual labor.

The increased amount of social insurance withholdings contributes to exerting an economic influence on production automation and reducing the share of manual labor. This increases the cost of goods and develops the need for replacing manual labor with new more highly productive technology and the adoption of more realistic criteria in determining the effectiveness of capital investments for production modernization and reconstruction.

Regulating the growth of wages is the other taxation mechanism. The economic purpose of this regulation is not to create a new source of income for the budget. The funds which are withheld are divided between the sectorial ministry and the Ministry of Finance equally, with a view to creating resources for specific wage control. The main thing here, however, is that a direct link is established between the growth of wages and that of social labor productivity and the national income. Unjustified disparities among wage levels of the individual economic organizations are eliminated. Conditions are provided for better wage ratios and for a better coordination between wage funds and commodity stocks.

Third: The setting of new wholesale prices for goods and services in the entire materials sphere is of exceptional importance in reducing all economic gorganizations to approximately identical economic working conditions.

The better consistency between wholesale prices and international prices enhances the role of wholesale prices as a general measure for socially necessary expenditures per unit of output. It creates possibilities for a realistic economic assessment of resources and their production costs and for upgrading the competitiveness of our goods on the international market. Under the new conditions, losses in production marketing indicate the extent of the straggling while the profits incicate the level of reaching or outstripping the achievements of countries most advanced in the corresponding field. What is effective on the international market never becomes effective on the domestic market as well. The complex and quite frequently unjustified redistributions of income are eliminated. Factual economic interests and effectiveness criteria are developed in the course of determining the development of economic organizations.

The second basic principle of the economic mechanism is the further development of the Leninist principle of democratic centralism in national economic planning and management.

The new correlation between democracy and centralism in planning is an essential aspect in the application of this principle. Along with a reduction in the number of centrally approved plan indicators, changes in their nature and content become particularly important. The "dynamics" method and the subjectivism and errors it triggered are confidently replaced with the development of plan indicators on the basis of updated engineering projects and leading experience, domestic and foreign. Now the economic organization shall be issued only indicators for end economic results (most important kinds, foreign exchange results, and net output), with ceilings for material and manpower resources required for achieving them.

Consequently, considering the economic system from this viewpoint, and using cybernetic terminology, we could say that at the outlet of the economic system society places result requirements mandatorily to be met by the system; the input consists of the corresponding ceilings and norms governing resources guaranteeing the normal development of the expanded reproduction process.

The economic organizations formulate all other indicators independently, in the course of their counterplanning. This also applies to indicators which, until recently, we could not imagine other than defined centrally—production costs, material outlays, capital investments, profits, profitability, social labor productivity, wages, and others.

The new relation between democracy and centralism has enriched the content of counterplanning. Today the counterplan is virtually the only expanded plan for the economic and social development of the economic organization and is the factual product of the labor collectives and the materialized expression of the creativity and economic initiative of leading workers, innovators, specialists, managers, and all working people. The counterplan is an open system which makes possible the practical implementation of the Central Committee's stipulation of the continuing and daily improvement of and addition to the plan with the developed new reserves based on the modernization and improvement of production and technology. In other words, the plan is formulated by those who are most familiar with production possibilities and with reserves and, thanks to the applied system of self-support and of wages based on results, by those who are most interested in the effective utilization of material, manpower, and financial resources.

Such radical reorganization of planning became possible only under the conditions of the self-support of the economic organizations, insuring the unity of interests of the individual worker and the labor collectives and the national interests.

The following question arises: Does this weaken centralized planning in management? It does not, for, in the future as well, centralized planning of basic national economic ratios and balances, the great advantage of the socialist social system, will be improved and strengthened. "Socialism is inconceivable . . . without a planned state organization which demands of tens of millions of people the strictest possible observance of a single production and product distribution norm." Consequently, the task is to make the methods and levers of centralized management more fully consistent with the scales and complexity of social production at the stage of the developed socialist society. This means that the traditional administrative management methods and mechanisms will be replaced, to an ever greater extent, by economic means of influence, including the levers of economic incentive and economic coercion.

The reorganization of management of our socialist national economy on an economic basis creates, on the one hand, the necessary conditions and, on the other, demands the ever broader and more energetic participation of the working people in social production management. In its deepest essence the systematic application of the economic approach and the new economic mechanism is a new and decisive step in the further democratization of management.

The economic approach requires and provides new great opportunities for the further enhancement of the role of the collective organs—the general meetings of labor collectives, economic committees, and economic councils. This is consistent with the task set by the party's Central Committee of expanding their rights and increasing their responsibility in resolving problems of managing production—economic activities. Under the self-supporting system, when the decisions of managers directly affect the material interests of labor collectives, the rights of the elective organs will be expanded. This will include the rating, and choice of management cadres, and the level of their wages based on their factual contribution to end results.

The process of democratization of management in our country is also characterized with the ever more extensive development of the state-social principle. We have long positive experience in the use of this new form of management in the social sphere and in culture. It has proved its viability.

The establishment of the National Agroindustrial Union is a new step in this direction in the area of material production. It is no accident that it was established precisely in agriculture, where democratic traditions have sunk profound roots from the very beginning of the cooperative movement, before the socialist revolution, and which were developed and enriched following the victory of the socialist system. Essentially, this qualitatively new form combines the functions and

methods of state management with those of a voluntary economic association of working people. This is an original model of the future improvement of economic management in our socialist society.

The democratization of social management and the ever more extensive and active participation of the working people in management is an internally inherent and a legitimate requirement of the socialist system. The political and social organizations of workers, peasants, and labor intelligentsia will assume an ever greater role and significance in the development of this process.

The third basic principle of the new economic mechanism is the fuller consideration of socialist market conditions, achieved through improvements in contractual relations, credit, and price setting, and organizing relations among socialist organizations entirely on an economic base.

This principle is achieved, above all, by upgrading the role of contracts in the process of the formulation and implementation of the plans.

Several basic requirements stem from this:

The counterplan is formulated on the basis of contracts in accordance with mandatory indicators and additional goods in demand;

The system of penalties for nonfulfillment of contractual obligations stipulates that the guilty party will not only pay the fines but will compensate for damages caused, including lost income;

The penalties imposed by the economic organization will affect the responsible officials:

The monopoly status of individual organizations will be limited and gradually eliminated in the production of goods and services and in supplies, transportation, and domestic and foreign trade and other activities within the national economy. The principle shall be observed that the monopoly belongs to the state while the respective commercial or other activities shall be exercised by the economic organization which yields maximum national economic results;

Greater possibilities are offered for price contracting depending on higher consumer qualities compared with standards, reduction of delivery deadlines, additional special requirements, and so on. The interests of the domestic consumer in such cases have been protected, for the contracting parties may not agree on charging higher prices than the stipulated ceilings in the case of scarce goods in demand;

The income of the economic organization shall be based on the factual monetary income from goods marketing. The system of account settling among socialist organizations shall be improved;

The stimulating role of credit and control through the leva shall be increased.

The purpose of all such measures is to insure the better utilization of the effect of the objective economic laws of socialist public production, and a better consideration of the nature of commodity-monetary relations under socialism. This insures the necessary conditions for the direct "clash" between the producer, on the one hand, and the domestic and international markets, on the other, for assuming the entire material, financial, and moral responsibility for marketing his goods, and for simplifying and rationalizing production-economic relations and eliminating unnecessary administrative levels. Consequently, it is a question of making the economic organization consistent with the nature, quantity, and quality of economic relations, and of the creation of the necessary economic conditions in which the market mechanism will contribute to the strengthening of socialist production relations under social control.

The fourth basic principle of the economic mechanism is the full and comprehensive application of the socialist principle of wages based on the quantity and quality of the invested work and the earning of every single leva of the wages.

The stipulation of the residual nature of the wage fund, as the core of the principle of self-support, is one aspect of this problem. This principle is entirely accurate and just, for one cannot divide something which has not been created or use something which belongs to someone else. "One should not think that the only feature of distribution is justice," Lenin wrote. "One should also consider that such distribution is a method, a tool, a means for upgrading production." That is why the other aspect of this principle is the fact that the absolue amount of the wage fund is a result and a residual for the economic organization and its branches, and that the individual wage of the worker is what he has earned. This means that once the worker has produced the goods or carried out the corresponding operations or other activities in accordance with established standards and indicators of internal cost accounting and of the individual organization of the wage system, in all cases he must be paid the wage stipulated for said work.

The application of the principle guaranteeing the payment of wages earned by the workers provides a practical solution to implementing the requirement of "vertical" responsibility, reducing to the specific efficials the penalties for difficulties in marketing, violations of the production rhythm, and other factors which cannot be influenced by the direct performer.

In this connection, ever more frequently the qualitatively new relations between the economic organization and its branches, and between the branches and the brigades are becoming ever more frequently apparent. The contractual principle in assigning mandatory tasks by the superior organization is becoming ever more extensively practiced. In the future, when the economic organization issues assignments to the engineering-application organization through the "orders-contract" system, not only the obligations of the performing organization but of the assigning organization as well will be defined. At the same time, the programmed and resource insurance of the assignments and the division of responsibility between performers and assigners, with the consequent specific penalties and incentives, will be guaranteed.

Brigade cost accounting also presumes the conclusion of internal contracts with the management of industrial enterprises, agroindustrial complexes, industrial-agrarian complexes, and so on. The damages, loss, or unearned income must be compensated in full in the case of their non-fulfillment by the economic managements in terms of delivering the necessary raw materials, materials, machinery, or instruments, or meeting other conditions required for the normal development of the technological process of the brigades.

Consequently, the new economic mechanism creates conditions for short-comings in the organization of the production process, through the organization of internal cost accounting and the rules governing the organization of wages, to be reflected not in general in the account of the economic organization or of society, but in terms of the specific management cadres and specialists who earn wages precisely for the sake of organizing production and management. This is an implementation of the principle that anyone who manages must be responsible for decisions made and orders issued.

Under the conditions of the economic approach and the new economic mechanism, the individual wage may be raised indefinitely in accordance with the growth of end economic results. Powerful economic incentives are created for the development of the creativity and initiative of millions of working people based on the similarity of the interests they share with society. Responsibility for improving the socialist organization of labor becomes stricter. Any delay with the application of scientific and technical achievements, any waste, any inexpedient expenditure, employing more personnel than is necessary, and violations of the technological and labor discipline will be reflected, in the final account, on the individual wages. Conversely, tremendous incentives will be provided for the growth of effectiveness and quality for creatively thinking and acting cadres who use the possibilities of material facilities and of manpower, material, financial, and foreign exchange resources.

III.

In his report to the 31 October 1979 National Conference, Comrade T. Zhivkov emphasized that, "The main product it which we must now begin

is that of the application of the economic mechanism, of a type of economic mechanism which will bring into action everything and, above all, science as the decisive productive force, and the electronization, chemization, and biologization of the national economy, and will bring about a sharp upgrading of social labor productivity."

This also determines the main criteria for the effectiveness of the economic mechanism—the elimination of state subsidies and the creation of the necessary conditions for upgrading social labor productivity in individual areas and activities of the national economy several hundred percent.

Some of the results achieved after the one-year application of the new economic mechanism in agriculture confirmed, unquestionably, the accuracy of the party's policy, even though they may not be sufficient for drawing a complete balance.

First, this includes the lowering of state subsidies by two-thirds, starting with the 1979 counterplan itself.

Second, a qualitatively new phenomenon in our practice in terms of demands for capital investments, is the fact that in the course of the formulation of the counterplans the agroindustrial complexes reviewed their requests for agricultural machinery and equipment and waved a considerable percentage of already approved capital investments for underproductive machinery and technologies.

Third: Extensive new methods were promoted and highly effective solutions were sought for improving the cultivation of the soil, upgrading the machine utilization coefficient, and harvesting, storing, and utilizing the fodder. An engineering plan for high corn yields was applied and 10 other engineering projects were drafted for basic farm crops. The organization of labor in animal husbandry was improved. As a result, compared with the preceding year, the overall agricultural output rose about 7 percent while net output rose 14.7 percent. Per capita production rose as follows: grain, about 100 kilograms; milk, 8.7 percent; meat, 2.3 percent; eggs, 10 percent, etc. We must also take into consideration that the harm caused by natural disasters exceeded the 1978 damage.

The main conclusion which may be drawn from these results is that the new economic approach and new economic mechanism are making it interesting for the labor collective to improve effectiveness and quality, and display initiative "from below" for the utilization of the tremendous possibilities and advantages of the socialist production methods.

The improvement of management on an economic basis is a process which does not occur automatically but which raises a number of problems.

First, this includes problems related to the fuller utilization of commodity-monetary relations and with increasing the organizing role of the leva. The adoption of the principle of considering that a commodity has been sold when the funds have been deposited into the account which the enterprise keeps in the bank or in its own safe formulated strict requirements concerning the rhythmical nature of production and for meeting supplies, and maintaining payment discipline.

The reorganization in the operation of economic activities in accordance with the requirements of commodity-monetary relations requires the adoption of a new attitude toward contracts and the observance of contractual discipline. This calls for contracts to acquire a new meaning and for contractual obligations to be guaranteed in accordance with the requirements of the production process in terms of months, 10-day periods, and individual days. Practical experience has indicated that contracts which do not include specific deadlines for meeting deliveries in accordance with the production cycle are drafted for the sake of appearances, and create difficulties for suppliers and consumers both in terms of the regular payments for marketed goods as well as the filing of prompt claims for damages caused and unrealized earnings. The requirements facing the economic organizations' units in charge of marketing and supply activities increase considerably both with a view to the implementation of contracts and the development of direct relations between suppliers and consumers, as well as the use of progressive methods for supplying and marketing goods on the domestic and international markets.

Commodity-monetary relations eliminate from the practice of economic workers the requirements to correct the plan, for a reduced plan will not provide income. It is only in cases of delay in the installation of capacities and changes in market conditions (international prices, domestic requirements, and others) that the Council of Ministers could operatively amend the basic indicators of ministries and departments without affecting their financial indicators.

In this respect, the reorganization affects the work of the mass information media and the social and state organs and organizations. The criticism of irregularities and weaknesses in the development of economic relations among economic organizations and between economic organizations and their 'ranches should take place mainly through the leva, through the establishment of specific liabilities along the chain of contractual obligations.

Secondly, the basic task of the economic mechanism is the creation of conditions for competing in the application of top scientific and technical achievements. This requirement calls for accelerating the completion of the creation of engineering-application organizations and organizing their work on an economic basis.

In accordance with the regulation on engineering-application organizations (which completed the drafting of the norming documents for the economic mechanism in the material production area) their work must be improved on a qualitatively new basis. Assessing the activities of these units, the main criterion must be their contribution to upgrading the overall level and effectiveness of the production-economic activities of the economic organization they serve, from the viewpoint of the level of reaching and outstripping the best domestic and foreign achievements in the corresponding area. The income of the engineering-application organizations should be made directly dependent on the reaching of technical-economic parameters which characterize leading achievements, and the national economic effect of applications.

Consequently, the primary task in the reconstruction of engineering-application organizations on an economic basis is the drafting of specific norms for specific working conditions which would stimulate through the shaping of income and the organization of individual wages the qualitative and prompt implementation of highly effective application tasks and apply economic coercion and penalties for inefficient engineering-application organizations. This will include their reorganization in accordance with the procedure stipulated for economic organizations permanently unable to meet their payment obligations.

Third. The right of economic organizations to combine labor, material, tinancial, and foreign exchange resources for resolving problems related to the application of scientific and technical achievements, concentratian and specialization, foreign trade activities, or any other economic measure in their common interest becomes an important link within the system of the new economic mechanism. This joining of resources and efforts shall not be hindered by any bureaucratic obstructions or coordinations with various agencies. The mutual benefit of the members of such associations guarantees, through the system of the economic mechanism, benefits to the national economy as well. Tremendous possibilities exist for the establishment of such associations among individual sectors and within sectors with a view to upgrading the effectiveness of economic activities in cooperating in the production of goods for export and the domestic market. Their utilization is an important reserve for upgrading end economic results and insuring the further development of economic organizations.

Fourth. The elimination of unnecessary administrative units is another objective requirement of the economic mechanism. It is a question not of self-seeking reorganizations and structural changes but of results from the energizing of economic levers. In the chain of purely economic interrelationships such links have no place or the right to exist. They conflict with the interests of collectives. Their nature is related to efforts to gain a reduced plan which could be overfulfilled more easily and, on this basis, lead to higher ratings, higher wages, and so on.

such units are not essentially interested in upgrading effectiveness and quality but in the creation of a steadily growing apparpatus.

Conversely, the economic organizations are interested in reaching maximum output with minimum outlays, reducing the size of the administrative personnel, and amending and finding the most effective structure for production and variety based on requirements. Consequently, the nature of the economically closed production system cannot tolerate such unnecessary administrative units. Naturally, the administrative units needed for the production and management processes should be restructured, developing their economic functions and ties, and organizing them in accordance with the principles of internal cost accounting and self-support.

Fifth. The principle of cost accounting and self-support calls for coordinating norms and ceilings on the use of labor and materials with changed working conditions, and the requirements of results and surplus funds governing wage funds.

The payment of a larger number of salaries compared with residual wage funds, in accordance with the system governing the formation and distribution of income, are an indicator of low standards of economic work and neglect of commodity-monetary relations. Efforts to improve the norming base which should always be the subject of attention of managements and specialists in economic organizations. The only accurate foundation for updating the norming base is the formulation of norms and standards in accordance with the improved technological and structural documentation and their combination with centrally approved indicators.

We must also bring to a rapid conclusion the work on improving the basic instrument for norming expenditures in enterprises and organizing brigade cost accounting—the normative cost broken down by goods, groups of goods, and types of activities. The reduction of itemized normative outlays must be based on and directly related to the specific assignments of the application of scientific and technical achievements. Under the specific conditions of the branches of the economic organizations, the development of norms and standards based on dynamics, regardless of the specific assignments of applied scientific and technical achievements and engineering projects could be considered as nothing but voluntarism and as total neglect for commondity—monetary relations and of the economic approach.

Sixth. Cadres have always been a decisive factor in the implementation of the party's economic policy. The task new is for the economic approach and economic mechanism to become their way of thinking and work style. In his 30 January 1980 speech, Comrade Todor Zhivkov substantiated the new criteria in the assessment of cadres: "Today we need a different type of manager: a manager familiar with the nature of the

actually approach and the new economic mechanism, creatively applying it, actually production organization, and management problems in depth; a manager with a feeling for the new, sensibly using his rights and assuming the required obligations; a manager who can raily and inspire the labor collective."

This means that today the criterion for assessing cadres is the extent to which they contribute to society and fight consumerism. This means that work "upwards," simed at amending the plan, and the economic approach must be replaced by a daily, systematic, and persistent work within the collective. In addition to fulfilling the assignments set by the center accurately and with discipline, today the cadres should be able to find their own assignments and to experience successes, take Fishe, and be worried by eventual failures.

In other words, it would be best under the conditions of the economic approach to develop efficient, able, and initiative-minded cadres who would rapidly react to the new conditions, would be alien to any manifestation of bureaucracy, and would be able to apply new developments in production, labor, and management.

Dur party has undertaken the difficult and reaponable assignment requiring systematic daily, profound, and adamant work which will be assistanted the personal concern of the working people in the struggle for operating the effectiveness and quality of all activities and insiring the ever better satisfaction of their growing material and applicate meeds and the all-round development of the socialist individual.

FOOTNOTES

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5003

CSO: 2200

EDITORIAL DESCRIBES DAMAGES TO CROPS, RECOMMENDS MEASURES

Sofia KOOPERATIVNO SELO in Bulgarian 31 May 80 p 1

[Editorial: "New Agrotechnical Measures Against Damages Caused by Nature"]

[Text] This year spring was characterized by unusual weather conditions. The continuous rains and low temperatures created major difficulties for the agroindustrial complexes, hindering the completion of the spring campaign in favorable agrotechnical periods. Until the end of May the sum total of average daily temperatures was below normal for the period by 70-100 degrees for the plains and by 120-150 degrees for the high altitude fields.

The reduced thermal and light energy and the abundant moisture hindered the normal development of the crops. The development of the autumn crops was delayed. The sprouting of the spring crops was hindered. Gonditions were created for the growth of weeds and the development of diseases and pests. In a number of areas, Northern Bulgaria above all, torrential rains and hail in the second half of the month destroyed substantial crops of grain corn, sugar beets, sunflower, soybeans, and others. They caused considerable water erosion. Along with the fertile surface soil stratum seeds and sprouted plants were carried away over large areas. Along the riverbeds and the valleys the draining water and high rivers swamped considerable areas and carried away autumn and winter crops. It is expected that in June the sum total of average daily temperatures will be below normal and that the precipitations will continue.

All this faces agricultural managers, specialists, and workers with responsible tasks. Energetic measures must be taken to compensate for the damages caused and for the mobilization of all forces and means for additional output.

The new economic mechanism creates conditions for developing the initiative of the cadres in the sector, and for creatively seeking solutions to the difficult circumstances. In accordance with specific conditions, each collective should find the best possible ways for compensating for the losses and fulfilling the plan—our main and immediate task. Today we must struggle for each day and hour of field work. We must fully use the equipment and determine all possibilities for surmounting the delay.

A real possibility still exists to grow corn by immediately planting hybrid strains with a short vegetation period. It will be necessary to sow within a short time the areas free from rape and clover which will be moved only once. The lost crops and the crops of dried-out swampy soils must be immediately replanted, the moment it becomes possible to use the equipment.

The second crops are an important reserve for insuring additional output. The Executive Committee of the Central Council of the National Agroindustrial Union adopted a national program for the intensified utilization of the land, in which second crops are one of the main tasks. Corn, sunflower, soybeans, fodder millet, mixed peas and oats, vegetables, and others may be planted as second crops. In this connection, the organization of the harvesting of autumn crops—one of the most important farm tasks—must be reassessed. Here again the struggle against time is the decisive prerequisite for success.

The torrential rains caused the lodging of about 20 percent of the areas in barley. A specific approach must be adopted to the harvesting of these crops. When the percentage of lodged crops is higher, they should be used for silage and we must wait for the wax ripeness stage. The possibility that barley could be stored when it contains 28 to 35 percent moisture makes it possible to harvest it 10 to 12 days earlier and to accelerate the sowing of the second crops. Barley for silage and grain, with a higher moisture content, may be harvested only to meet the estimated needs for the animals of a specific farm. It must be categorically emphasized that, in all cases, the plan for the purchasing of barley by the Grain and Fodder Industry DSO [State Economic Trust] must be fulfilled in accordance with the standards set for quantity and quality.

The traditional methods for the pre-sowing treatment and the sowing of spring and second crops will not eliminate the difficult position. The use of the plowing (regardless of depth), disking, harrowing, and sowing system will delay the sowing by 15 to 20 days after the first harvest, and the moisture in the soil will have evaporated.

Results of long scientific studies, and domestic and world experience have confirmed the unquestionable possibility to grow in our country a better crop from autumn, spring, and second crops with minimum disking cultivation and without cultivation (direct sowing). The practical specialists were provided with extensive information on such problems in the past few months with the special pamphlets which were published, articles in periodicals and other mass information media, and the conferences and meetings held for the exchange of experience and demonstrations. Minimum cultivation of autumn crops is already developing in practice regardless of the unwillingness of some specialists and managers to abandon the classical pre-sowing plowing. Nevertheless, they are still applied on a

Father limited amount in the case of the spring crops, even though experience has proved that in the case of carbonate chernozems and some other soil types with a lighter mechanical structure, deep autumn plowing could be entirely replaced by minimum disking.

Direct sowing results are even better. With high quality sowing, such yields may be increased by 10 to 50 percent while expenditures for fuel per 1000 decares directly planted averaged 230 liters (compared with 910 liters for double harrowing and sowing and 2310 liters in traditional cultivation).

There still is a shortage of sowing machines for the mass utilization of direct sowing of autumn crops. The possibility exists to sow extensive areas in trench crops using this method. This is accomplished with the use of properly redesigned available pneumatic SPGh-6M sowing machines and the soviet SZS-2.1 soviet sowing-cultivating machine. The method for the redesigning of the sowing machine is already familiar to our specialists. Additional instructions were published in the 7 and 8 May 1980 issues of KOOPERATIVNO SELO on such redesigning. A conference with a demonstration was held. The NIMESS [Scientific Research Institute for the Mechanization and Electrification of Agriculture] in Sofia has organized the central manufacturing and supply, on request, of the necessary equipment for the redesigning of the SPCh-6M sowing machine.

The managers and specialists of many okrug agroindustrial unions and agroindustrial complexes have a proper unders anding of the great effect of
minimum cultivation and direct sowing. They studied the technology
properly, became familiar with the experience of leading workers, took
measures for the redesigning of the sowing machines, and created the
necessary organization. Directly or after minimum cultivation they planted
corn following rape and clover following the first mowing and were ready
for sowing second crops after peas, early potatoes, barley, and wheat.
Nevertheless, many farm managers and specialists are still giving little
thought to such topical problems. They continue to use traditional cultivation methods—plowing, disking, cultivation, and harrowing, or five to
10 operations before sowing.

The managers and specialists of okrug agroindustrial unions and complexes throughout the country must radically change their way of thinking and action and this very year make the fullest possible use of the possibility for minimum cultivation and direct sowing. Well drained and loose soils with a porous structure and cleared from perennial tuber weeds are suitable for such sowing. These requirements are met by a large percentage of carbonate, typical, and slightly leached chernozems, and alluvial-meadow and other soil types.

Depending on the soil type, amount of weeds, and preceding crop, the sowing may be done in several ways:

Direct sowing of corn following a preceding crop of rape, alfalfa, rye, and barley for grain mass, and autumn crops. In this variant, phosphorus fertilizers are applied when the soil is prepared for the preceding crop, while nitrogen fertilizers are applied together with the seeds. After harvesting the preceding crop (with the exception of autumn crops) the crops are apprayed with Gramoxon in a dose of 0.4 liters per decare for the destruction of the green surface mass; after a rape crop 2-4D or a 15 percent solution of ammonium nitrate may be used. In order to secure the destruction of the weeds the soil must be treated with the herbicide Cearine, 300 grams per decare. After the sowing and the sprouting of the corn, in the third to the fifth leaf stage, the crop must be treated with 2-4D. Particularly suitable for direct sowing are areas previously planted in early potatoes and peas for grain cleared of weeds.

Silage corn could be planted without cultivation and with a monredesigned SZS-2.1 sowing-cultivating machine, with 23 cm inter-row intervals or separating the clusters with 46 cm intervals, controlling the spreading of the seeds in the row.

Sowing is possible with minimum cultivation if, following the harvesting of the preceding crop in a very moist period the soil has become strongly packed and roots from the machinery have developed. In such cases, immediately following harvesting of the preceding crop, one or two diskings at a depth of 8 to 10 cm become necessary with a BDT-7 or BDT-10 and planting with a SZS-2.1. After minimum cultivation the application of Gramaxon is not necessary. All that are needed are the herbicides Ceazine and 2-4D.

In hail-stricken areas planted in spring and autumn crops the green mass may be eliminated with Gramaxon and direct sowing may be undertaken. The destroyed green mass may be used as mulch after the sprouting of the corn. If necessary it could be treated with Ceazine and 2-4D.

The direct sowing of the second crops, after barley and wheat, is particularly imperative. This will enable us to preserve the then scant moisture of the soil and hasten the sowing by 15 to 20 days. Following these preceding crops it is no longer necessary to spray Gramaxon but merely to use herbicides for the elimination of weeds and self-seeding plants. As an exception to direct sowing of second crops, sowing following minimal processing may be allowed but, in no case, should there be pre-bowing plowing.

In the use of herbicides we must bear in mind there are consequences which may have an adverse effect on the autumn crops to be planted subsequently on the same areas.

The mass application of minimum cultivation and direct sowing, with the strictest possible observance of technological requirements, will enable agriculture to surmount the difficulties caused by the adverse weather conditions. Our socialist agriculture has great possibilities and reserves, and, undoubtedly, all managers, specialists, and workers will make the fullest possible use of the achievements of scientific and technical progress to compensate for the losses.

5003

CSO: 2200

EDITORIAL OUTLINES MAJOR TASK IN AGRICULTURE

Sofia RABOTNICHESKO DELO in Bulgarian 31 May 80 pp 1-2

[Editorial: "Strategic Task in Agriculture!"]

[Text] The BCP Central Committee Politburo has adopted theses on the systematic application of the economic approach and on improving the socialist organization of labor in agriculture. The theses concretize the concepts and stipulations is and by Comrade Todor Zhivkov at the national conference with the particular state, and agricultural aktiv, last April. Creatively developing the ideas enclosed in the decisions of the lith BCP Congress, the National Party Conference and the BCP Central Committee March Plenum, the leader of the party and state enriched the party's agrarian policy, and equipped the party and economic cadres with an approach, principles and new concepts on the solution of the strategit task in the field of agriculture—increasing production and upgrading it effectiveness. The BCP Central Committee Politburo theses are, essentially, a scientific strategy for the guidance and management of agriculture.

There are two basic, interrelated, and mutually complementing elements of this new and, essentially, revolutionary step in the development of agriculture.

The first and determining one is the systematic application of the economic approach.

Life has categorically proved the great advantages of the new economic approach. We are familiar with the great successes achieved by agriculture in 1979, the first year of its organization on an economic basis. This created favorable conditions for the development of the economic initiative, creativity, and activeness of cadres and agricultural workers, for strengthening the discipline, and for increasing responsibility. All this had a favorable influence on the fuller determination and utilization of reserves for increasing production and its effectiveness.

What are the new aspects which the BCP Central Committee Politburo theses introduce in this direction? The principal aspects of the economic approach are outlined. Planning is emphasized as the basic instrument and principal means for scientific and economic management based on cost accounting and self-support as the core and essence of the economic mechanism, the improvement of the brigade organization of labor, and the establishment of direct ties between production organizations and the domestic and foreign markets. All this faces the party, state, and economic cadres with the task of creating even better conditions for the fullest and systematic application of the new planning technology, applying cost accounting and the principles of self-support along the entire chain of the reproduction process, and make fuller use of commodity-monetary relations in order to increase the volume, expand the variety, and improve the quality of output.

The principles, criteria, concepts, and barometers needed for the new brigade organization of labor in the country, developed in the theses, have great scientific and applied value. Life unequivocally proved that the brigade, and the brigade alone, as the basic form of the socialist organization of labor, makes it possible to achieve the type of organic and optimal combination of production elements—the land and other labor tools, labor objects, and manpower—without which it would be difficult to expect maximum results. The economic approach may be applied most fully providing that the brigade ensures the full application of the principles of self-support and cost accounting, and the greatly necessary utilization of these principles by every participant in the labor process.

In its current aspect, the brigade in agriculture is unable to meet such requirements. That is why improving the brigade organization and developing new type brigades is now becoming the main and immediate task of party, state, public, economic, and scientific research and application organs and organizations in agriculture.

What are the basic features of the new type of brigade organization of labor? Which new principles, approach, and criteria will be the foundations of its development?

The new type brigade will be comprehensive. It will have from 30,000 to 100,000 and, in some cases, even over 100,000 decares of land. It will be based on the technological lines for one or several crop rotations. This means that a proper and a scientific structure of the production process will be developed over huge areas, in accordance with the production program of the agroindustrial complex, consistent not with temporary but with lasting interests, objectives, and tasks. Conditions will be created over large territories for the fullest possible utilization of the entire land, increasing the density of crop rotations, and ensuring the even year-round utilization of equipment and manpower. Particularly important here is the fact that the problems of production structure, crop rotation,

use of the land, equipment, and manpower, and, in general, the development of the new brigade organization of labor, shall be resolved on the basis of high level concentration and specialization of production and labor, and that they must contribute to the enhancement and maintaining of this level.

One of the major problems to be resolved by the new type brigade organization is the creation of conditions for the fullest possible utilization of abandoned and neglected land, pastures, and meadows, particularly in mountainous and semi-mountainous areas. In this respect our generation has a duty to itself and to those which will follow it. A great national wealth has been ignored and neglected. It could and should be restored to life so that it may produce and become the base of the further development of animal husbandry. Science and leading practice indicate the means to achieve that which must become the essence and the content of engineering projects; the development of such land, maximum simplification of the production structure, the development of special crop rotations, the use of a suitable system of machines, and, last but not least, the solution of a number of social problems.

The new type brigade will achieve the type of combination of land, equipment, people, crops, and size of crops which would insure the highest possible end results—the production of more and less expensive goods by lowering manpower outlays and raising the land and equipment utilization coefficient. Naturally, the problem of its optimality will be resolved on a scientific basis, with the help of tried methods such as designing and modeling, totally interrelated with and interdependent on specific conditions. What should be born in mind is that it is only on the basis of various designs and models that the type of optimum combination of factors—structure and nature of the production process and related technological solutions—could be achieved, thus greatly contributing to upgrading labor productivity, increasing output, and improving its effectiveness.

The intensification of the economic approach calls for the brigade to be based on the systematic application of the principles of cost accounting and self-support. On the basis and within the frameworks of the norms and indicators issued to the brigade by the agroindustrial complex, the brigade will have total autonomy in the formulation and implementation of its counterplans. It will be assigned functions related to contracting, material support and marketing. On the basis of commodity-monetary relations it will have the right to establish contractual relations with other brigades within and outside the agroindustrial complex, with a view to the most effective utilization of the basic production factors. The intra-brigade labor organization within it will provide conditions for the principles of self-support and cost accounting to reach even the smallest production unit, the individual mechanizer, worker, and specialist.

Along with its production-economic tasks, the new brigade organization of labor will be interested with important social functions. Within the framework of the tasks issued to it by the agroindustrial complex, the brigade will set up funds for additional material incentive and for the satisfaction of the social and cultural needs of its members. It will assume certain obligations related to the development of the private farms and the improvement of the self-support system. It will also play an important role in the development of the settlement systems, and in resolving problems of the comprehensive social services provided to their population. All this will give new blood, a new meaning to the agroindustrial complex!

The new type brigade will systematically apply the principles of democratic centralism with all related rights and obligations in terms of management, choice of leadership, and participation of the working people in the formulation and adoption of the counterplans, the organization of their execution, and the distribution of labor results.

It is a question of a truly new approach, of new criteria, and of a new concept. All this will be based on the latest scientific and technical achievements and leading experience, and on engineering plans on the national and okrug levels, and on the levels of the individual agroindustrial complexes and brigades, formulated and approved by authoritative collectives and councils of experts, with the extensive participation of specialists and labor collectives.

What are the prerequisites and factors for meeting the new requirements included in the BCP Central Committee Politburo theses? In the course of the building of socialism our agriculture achieved great successes. It created tremendous material factors and prerequisites. To begin with, this includes high level concentration and specialization which offers extensive possibilities for the application of the best achievements of scientific and technical progress: the tremendous production-technical base whose productive capital totals nearly 7.8 billion leva; the strong cadre and scientific potential, and rich stock of most highly productive strains and breeds; and the intensifying socialist economic integration. The key to the fullest possible utilization of these factors and pre-requisites is found in the systematic application of the economic approach in agricultural management and administration, and the development of new type brigade organization of labor.

The systematic application of the economic approach and the improvement of the brigade organization of labor are major and complex tasks. Economically, they will bring about the creation of a greatly needed unifying and organizing link in the production factors, capable of providing all the necessary conditions for labor productivity to grow not in percentages but in hundreds of percentages. Along with everything else, this means a greater volume and variety of products, and the fuller satisfaction of the needs of the people. Politically, this means the even further expansion of democracy within the labor collective, in the interrelationships

among people in the collective, and between the collective and the manager. This is the basis for the groove of the role, place, and responsibility of the individual working person in production management and implementation of objectives. The problem has an important ideological significance as well: the development of individuals with the convictions, knowledge, ability, and responsibility for the application of the latest achievements offered by the scientific and technical revolution and leading domestic and worldwide experience.

All this faces those involved in agriculture, those who manage and resolve its problems, those who service it, with exceptionally high requirements.

Work on the development of the new brigade organization must be undertaken immediately. It must be developed intensively and on a broad front. It must include all party, social, and agricultural organs and organizations, scientific, design, and application units, and the entire creative potential of the agraindustrial complexes. We know that at its initial stage the brigade of a new type will be based essentially on the existing material an achnical facilities; in the second stage it will be based on the most dern highly productive equipment and technological lines for comprehensive mechanization with the maximum inclusion of modern automation facilities such as electronics, robotics, pneumatics, and others. That is why there are no reasons for bustling or sluggishness! The task must be taken up on a shock basis, with mobilization, and implemented systematically and steadfastly. Naturally, great efforts, extensive organization and political work, and maximum development of the creative and competitive principles are needed. Problems related to the establishment of engineering projects and the building of the brigades must be resolved in such a way that, starting with this autumn, the new brigade organization may cover crop growing, and, subsequently, livestock breeding and all other agricultural sectors.

Under such circumstances agricultural science faces exceptionally major tasks. The practical workers expect from it precise recommendations for the application of basically new systems for land cultivation and livestock breeding, plans for intensive crop rotations for the various areas, and new solutions and technologies for the mechanization of agricultural production.

All this faces the National Agroindustrial Union with major tasks. Its duty will be to supply the okrug agroindustrial unions and complexes with the necessary information for the elaboration of engineering projects, with a firm norming base, and with lasting indicators for mandatory sales on a long-range basis, and the availability of resources. Another of its tasks will be to develop an optimum structure and apply modern management systems, and to undertake the upgrading of cadre skills in the spirit of the new requirements.

A radical change is needed also in the work of the economic ministeries and their branches in industry, transportation, trade, and material-technical supplies.

The party committees and organizations, and the party members face particularly great obligations and responsibilities. The task of the systematic application of the economic approach and the improvement of the socialist organization of labor in agriculture will be successfully implemented only if it becomes the profound concern of the entire party, The duty of the party committees and organizations is the entire people. to develop an efficient system for the explanation of the theses and the tasks stemming from them, the development and application of engineering projects, the creation of an atmosphere suitable for a profound study of achievements and problems in the okrugs and individual complexes and brigades, and to insure all this through party-political measures. The party committees and organizations are the ones which will arm the cadres with a new style and methods of work, and the ability and skill to be properly oriented in the circumstances and in terms of the urgent tasks, and the means for their implementation. The Bulgarian Agrarian National Union, the trade unions, and the Dimitrov Komsomol must also assume their proper position in the solution of this essentially strategic problem in agriculture.

In terms of intent, and of economic, political, social, and ideological consequences, the systematic application of the economic approach and the improvement of the socialist organization of labor in agriculture are tasks of exceptional importance. Everything possible must be done and maximum efforts, energy, knowledge, skill, creativity, and daring must be applied for its successful implementation!

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FOREIGN-TRADE DEVELOPMENTS IN 1980'S DISCUSSED BY PANEL

Prague HOSPODARSKE NOVINY in Czech 23 May 80 pp 8-9

[Panel discussion in Prague in mid-April 1980; moderated by Anna Bisofova]

(Text) A seminar on the problems of managing further development of Czechoslovak foreign trade was held in Prgaue in mid-April. It was sponsored
jointly by the Czechoslovak Scientific and Technical Society's Committee for
Scientific Management and the society's Central Professional Section, in cooperation with the Poreign-Trade Research Institute. The seminar was devoted particularly to the timely problems of the objective conditions for
the development of our foreign trade, and to the problems of its institutional superstructure. It was attended by 300 officials from production and
trade.

In conjunction with the seminar, MOSPODARSKE NOVINY invited for discussion a panel of foreign-trade specialists that included the following: Docent Dr Frantisek Kerbel, CSc, director of the Foreign-Trade Research Institute; Dr Engr Vitezslav Kostak, scientific secretary of the Foreign-Trade Research Institute; Engr Oldrich Mojzisek, scientific-technical official of the Foreign-Trade Research Institute; and Dr Jaromir Ruzicka, director of the Legal Department within the Federal Ministry of Foreign Trade.

Superpremium for Quality

[Question] So far as foreign trade is concerned, now at the beginning of the 1980's we are confronted with tasks that up to now have been unprecedented in the area of internal and external economic conditions. At the beginning of this decade, then, what are the external economic conditions for the development of Czechoslovak foreign trade?

Rorbel: It is entirely safe to say that the external economic conditions in the 1980's are entirely different from the conditions at the beginning of the 1970's. During that decade there occurred, in the world economy and international trade, changes that departed from the series of cyclic fluctuations and led to a qualitatively different stage of economic development and to new economic conditions on the world market for raw materials and finished products.

The period of "cheap raw materials" is definitely over. The period has arrived of "more-expensive raw materials and expensive fuels"; and also the period of "expensive finished products," although this does not apply to all finished products. Only to the ones that are of high quality and have a high technical level and good utility characteristics. Whereas the rise in the prices of raw materials, and of fuels in particular, resulted in price profits for all exporters of raw materials, not all producers of finished products benefited from the higher prices, only those who were able to offer quality merchandise of a high technical level, customer services, spare parts, etc.

A rise in the prices of raw materials, particularly fuels, and within the category of finished products a sharp price differentiation in accordance with quality were characteristic of the 1970's, and this development will continue in the 1980's. Quality merchandise did not encounter a marketing crisis in the 1970's—not even during the capitalist slump in 1975 and at the beginning of 1976—nor will it encounter marketing difficulties in the 1980's.

Whereas in the 1970's the exporters of quality merchandise received merely a "price premium" and the exporters of inferior merchandise paid merely a "price penalty," in the 1980's the exporters of quality merchandise will receive a "superpremium for quality" and the exporters of inferior merchandise will be unable to operate on foreign markets even at the cost of further price concessions.

This applies to all participants in international trade. There is only one way to successfully weather this development. There is no other solution than to take this world development into account and simply adapt to the objective conditions that exist on the world market for raw materials and finished products. The Czechoelovak economy's adjustment to these conditions must be regarded as one of the most important indicators of the effectiveness of the entire complex.

Meanwhile the response of our economy to the altered world conditions has allowed down, particularly in the exposed areas of the Czechoslovak economy. The point is not that our economy's inputs are small--they are at least comparable to the inputs of a number of industrially developed countries--but that, in comparison with the world, we have considerable reserves particularly along the output axis.

Under the present conditions, the philosophy of solving these problems --particularly the Czechoslovak economy's effectiveness in relation to the external environment--will have to be sought in mobilizing our internal resources and already invested capital, instead of expecting a solution through further investments or through the further use of external resources.

In pursuing the economy's more-effective response to the conditions on the world market it will be necessary to give preference to the active long-range elements that reinforce our export performances, not only in volume

but also in value terms. Adjustment characterized by restrictive elements cannot be regarded as workable in the long run.

The Czechoslovak economy is objectively capable of adjusting to the given world conditions, and this must be regarded as the solely feasible alternative of the Czechoslovak economy's development. Pailure to do so would mean the loss of our dynamic growth and present growth rate, resulting necessarily in stagnation.

At the beginning of the 1980's the main problem of our economy's export performance remains the shortage of export allocations that is associated with failure to pursue energetically enough the strategy laid down in the conclusions of the party congresses and in the initial assumptions of the five-year plans. The questions of marketing opportunities, commercial ability, institutions, etc. are significantly lesser problems.

According to all educated forecasts, a further dynamic growth of international trade can be expected in the 1980's. The qualitative requirements of individual world regions regarding the technical level of the products will rise considerably in the time span under consideration.

Production Base Must Be Utilized More Intensively

[question] In the 1970's, Czechoelovakia achieved an entire series of favorable results in developing its economy and socialist system. But in all branches of production, in the nonproductive sphere and in the area of foreign trade there still exist considerable reserves. Primarily where do you identify these reserves?

Rostak: Just as in the past, also in the 1970's the favorable trends were the dominant in our development. In the second half of the decade, however, realization of the tasks began to depart from the plan's objectives, in certain sectors of the national economy. The causes of this were analyzed in detail at the sessions of the CPCZ Central Committee. These causes were primarily the low effectiveness in the utilization of internal resources and reserves, and also subjective shortcomings in management, the undesirable effects of which were multiplied by the worsening conditions of selling and purchasing on the world market.

Engineering is the decisive branch of manufacturing industry, but the dynamic growth of engineering is not accompanied in all sectors by a suitable improvement in quality. I have in mind the technical parameters and the economic effect. Our engineering production is very capital-intensive, and the intensive factors of growth do not assert themselves adequately in it. The structure of engineering is characterized by considerable inertia. The proportion of electronics is low. We export about 30 percent of our total engineering output, whereas comparable capitalist countries export between 40 and 70 percent of their outputs. Machinery import likewise accounts for 30 percent of the total demand for machinery in the Czechoslovak economy, whereas in comparably developed countries the proportion of machinery import is between 45 and 90 percent. Participation of our engineering in

the international division of labor is becoming more and more limited. World developmental trends have relatively little influence on the structure of our engineering, within which the dynamic sectors—particularly electronics, computer technology, electrical engineering, and instruments—are not adequately represented. Only a proportion of Czechoslovakia's engineering products meets the world level.

Up to now the development of Czechoslovakia's ferrous metallurgy has been predominantly extensive. Its problems—the low proportion of oxygen converters, electric furnaces and continuous casting, the obsoleteness of a proportion of the production installations and the associated high energy consumption—are reflected in metallurgy itself as well as in manufacturing and foreign trade. Specific manifestations of this are the low proportion of high-grade and alloyed steels, of products with improved utility characteristics, the excessive consumption of metals in the economy, the inability to replace at least a proportion of the imported iron ore with secondary domestic sources (scrap), and the low overall effectiveness of exporting metallurgical products.

The fuel and power industry of the CSSR is characterized by a high proportion of solid fuels whose mining is becoming more and more expensive, and by dynamic increases in consumption. In the case of selected energy-intensive products the specific consumption of fuel and power is higher in Czechoslovakia than in the industrially developed capitalist countries or in the UBSR and the GDR. Energy, expended primarily in material production, does not appreciate adequately. We have an excessively high proportion of energy-intensive outputs in engineering, metallurgy and some sectors of the building materials industry.

In the area of foreign trade the Czechoslovak chemical industry has a stronger import demand than export capacity. In trade with the capitalist countries the export of products from the primary processing of petroleum and coal exceeds the export of final products. Our consumer-goods industry has problems with its production base, and with shortages of manpower and raw materials. Its relationship with foreign trade is differentiated considerably, both quantitatively and qualitatively.

Dur agriculture ranks seventh in the world in terms of intensity. Its high level ensures the population's food supply. However, these indisputably favorable results are associated with a growing demand for supplies from industry. These include not only farm machinery, but also motor fuel, fertilizers, herbicides and pesticides whose production depends on imported raw materials. Importation of bread grain has essentially been liquidated, but the demand for imported feed is rising. Crop production is plagued by crop fallures, the consequences of which are solved through imports in excess of the plan.

The fuel intensity of Czechoslovak transportation has increased. International comparisons show that crosshauls make production in Czechoslovakia more transportation-intensive than in the GDR or in comparable industrially developed capitalist countries.

The scientific-research potential of the CSSR and costs of developing it are in agreement with the level in comparable countries. However, our excessive-ly wide production assortment, and the structure and division of our research and development base make it impossible to keep pace with the world. We are unable to fully concentrate our scientific-research manpower, capacities and resources on tasks that are decisive for society as a whole. As a result, our scientific-technical development is delayed and this, together with the changes in the external economic environment, makes it more difficult for us to apply the fruits of our work, at home and abroad.

Czechoslovak Engineering and World Engineering

(Question) Within the world industrial output, and also within Czechoslo-vakia's industrial output in the 1970's, the production of machinery and equipment occupied the most important place. In evaluating the soundness and effectiveness of our participation in the international division of labor, therefore, it is appropriate to ask what are Czechoslovak engineering's realistic possibilities for keeping pace with world development, and on what must we concentrate our efforts so as not to lag behind.

Mojzisek: From the fact that the CSSR accounts for 0.3 percent of the world population and for about 1.29 percent of the world industrial output we may justifiably conclude that our production base in engineering is highly developed. But if we compare these figures with the proportion of workers employed within Czechoslovak engineering in relation to the total number of workers employed in engineering worldwide (about 2.08 percent), we necessarily come to the conclusion that the performance of our engineering workers with their above-average qualifications is lower. Likewise the average annual growth rate of world trade in engineering products in the period 1970-1977 at current prices, which was more than 21 percent, exceeded by nearly one-half the average annual growth rate of our engineering export during the same period (14.4 percent). With this growth rate, roughly two-thirds of the world growth rate, Czechoslovakia ranks 33d in the world in the export of engineering products, having dropped from 13th place in 1970, and from 15th in 1977.

We often encounter the objection that our machinery performs more and more intensively the function of the principal medium of exchange in our external economic relations. This contention is supported by the fact that in 1965 through 1977 the net balance of trade increased to more than 2.5 times its original level. This figure is correct. The sharp rise in the prices of decisive raw materials, sources of energy and many food products on the world market, however, has lately compelled other comparable economies of the transformation type to performances higher by at least one order of magnitude. For example, Sweden's net balance of trade in engineering products during the mentioned period increased nearly 22-fold; Japan's, 21-fold; and Frances, more than 13-fold. Clarification of the real reasons of such pronounced differences in performance is highly desirable also because engineering's share of our total export has been more than one-half in recent years.

The individual economic production units and their engineering enterprises should specify for their products some of the phenomena to which we have called attention as unfavorable when compared with world developments. Only from comparisons at this level will it be possible to draw specific conclusions for solving the decisive obstacles to the engineering plants' greater and more effective participation in the international division of labor, and to their greater adaptability to the world developments.

(Question) Stricter requirements of the world engineering market regarding the technical-economic parameters and utility characteristics of the products cannot be considered as objective barriers to the faster growth of Czechoslovak export. From an evaluation of the overall situation it follows that we would not be encountering marketing difficulties and problems on the world market if our engineering were sufficiently adaptable and its products were competitive. Evidently we must seek the basic causes in the domestic sphere.

Mojzisek: The above contention is confirmed already by the fact that the volume of world trade in engineering products increased at a substantially faster rate in 1970-1977 than Czechoslovakia's engineering export. Thus demand on the world engineering market was substantially greater than what we were able to utilize. This is why our engineering export's share of the world market in engineering products dropped from 2.78 percent in 1965 to 2.10 percent in 1970, and to merely 1.56 percent in 1977. This also explains the decline of Czechoslovakia's position among the world's leading exporters of machinery and equipment.

The development of statistics on international trade in engineeering products confirms that we are lagging behind the world average in our ability to compete, to provide services and to supply spare parts. This, of course, does not apply equally to all engineering products. In the case of some products our ability to compete, to provide services and to supply spare parts is better; and in the case of other products it is worse. On the basis of the aggregate indicators, however, we are able to determine the average, and it is unfavorable for our engineering. An improvement of our engineering products' level of competitiveness depends on the more-effective and more-sensible functioning of the domestic sphere, particularly of the engineering organizations and their R & D base. Instead of using the stricter requirements on the world market as an excuse, we must do everything possible to meet these requirements.

[Question] Unfortunately, the engineering producers and exporters of below-average adaptability include also the Czechoslovak engineering enterprises and their R & D base that have not kept up adequately with the world level. For this reason their deliveries to foreign markets do not produce the results that our national economy would need. Evidently the average prices perkilparam can serve as one of the arguments that are of relative validity.

Mojzisek: The limited expressiveness of the price per kilogram as an indicator already follows from its composite nature. When used in international

comparisons, it reflects also the effect of the customs barriers that our products must overcome, the higher transportation costs resulting from our landlocked situation, and a number of other factors that we are unable to properly identify. If we estimate that the combined effect of these circumstances is about 20 to 25 percent, then there still remains wide room that our engineering and its sectors have not utilized. If our engineering, in comparison with a number of other economies, shows close similarities in terms of material inputs but significant differences in outputs, then the unsatisfactory level of the appreciation of raw materials and supplies must be regarded as the main reason of the differences in the performances of Czechoslovak engineering. In our engineering export to the EEC market the prices per kilogram increased nearly 74 percent in the period 1965-1976. If we were ignorant of the international comparisons, we obviously would regard this result as favorable. However, a comparison of the rise of the per kilogram prices, which increased more than 127 percent during the same period, leads us to an entirely different conclusion. Even more striking is a comparison of the development of the per kilogram prices in our export to the EEC market during the past two years. While in 1975 and 1976 the per kilogram prices of our engineering export to capitalist countries increased on average by not quite 10 percent, the increase of the per kilogram prices of the total engineering export to the EEC market during the same period was more than 21 percent, i.e., double.

[Question] In sum, the problems of our external economic relations cannot be solved effectively and permanently by mobilizing for export additional materials to which not enough value is added. This must be achieved primarily by increasing significantly the appreciation of the inputs of raw materials, energy, live labor and materialized labor for the production process in manufacturing, and in engineering in particular. Does our engineering have the prerequisites for keeping pace with the world in this respect?

Mojzisek: Appreciation of the inputs for the production process in engineering at least at the level of the world average is not a question of weeks or months, nor is it an easy task. Until we have succeeded in solving this task, we unfortunately must continue to secure our export tasks even at the cost of mobilizing additional materials. Here the point is that through the innovation of our engineering products, in order to make them more competitive, we must achieve more-effective response to worlwide development and to the need of better balancing our external economic relations. On the basis of international comparisons, we are fully convinced that our engineering has the prerequisites for this. Attainment of comparable world performances is primarily a question of organization and management. We believe that implementation of the Set of Measures for Perfecting the System of the National Economy's Planned Management in 1980 will play a positive role in this respect.

Comprehensiveness, Effectiveness, Level of Management

[Question] The planned management of Czechoslovak foreign trade, together with the related financial and economic instruments of management, will

permit regulation of foreign trade in such a way that its development will be in accord with the overall long-range objectives of the Czechoslovak economy, and of Czechoslovakia's balance of trade and balance of payments. What are the basic characteristics of our foreign-trade policy applied within the system of management?

Korbel: From the present system of management and from the Set of Measures for Perfecting the System of the National Economy's Planned Management in 1980 it clearly follows that in Czechoslovakia commodity trade with the individual countries, by the foreign-trade organizations within the framework of their commercial policy, is not command-directed, just as it was not command-directed in the past. What position Czechoslovakia's trading partners maintain or gain on our market depends also on their business ability.

The planned management of foreign trade does not mean at all that the foreign-trade organizations will not continue to weigh carefully and compare the advantages or drawbacks of each trade transaction. Here the Czechoslovak foreign-trade organizations act independently, on the basis of their economic and business deliberations, within broad autonomous competence. In the actual conduct of foreign trade they strictly adhere to the principle of nondiscrimination and are guided in their activity by business considerations—i.e., particularly by the question of price, quality and other terms of the sales contracts—and they of course permit comparisons and competition for all exporters with whom Czechoslovakia has trade relations.

Czechoslovak imports are not limited by any quantitative restrictions or licensing procedures. The basic regulators of Czechoslovak import are the customary business principles, the state of Czechoslovakia's foreign exchange reserves, and particularly the export possibilities and other tradepolicy conditions that stem from the import possibilities and the system of partner countries, and which will influence favorably or unfavorably the mutual exchange of goods.

It is indisputable that the foreign-trade policy of the United States is striving to worsen the trade-policy and other conditions of East-West trade. Even though these attitudes are not supported by the representatives of Western trade and industrial circles, they nevertheless introduce a certain disturbance into the trade-policy atmosphere of international trade.

[Question] The political and state organs of the CSSR are devoting primary attention to the area of economic relations with foreign countries. They have adopted a series of measures aimed at reinforcing particularly the role of foreign trade in raising the overall effectiveness of the CSSR economy, and at making more effective the management of economic relations with foreign countries. An important means of achieving this objective has been the enactment of the new law concerning economic relations with foreign countries. What is the purpose of this law?

Ruzicka: The Law on Economic Relations With Foreign Countries, enacted by the Federal Assembly on 10 April 1980, regulates the management,

organization and control of economic relations with foreign countries. This regulation is comprehensive because it defines the competence of the federal and republic central organs and other organs in managing, organizing and controlling each of the regulated forms of economic relations. The law covers a broad range of questions, the most important of which is so-called foreign economic activity. This concept means primarily foreign-trade activity, foreign economic services, production specialization and coproduction with foreign countries, scientific-technical cooperation, the protection of rights to industrial property -- i.e., to patents, industrial designs and trademarks -- and the protection of technical know-how in relation to foreign countries. The law regulates the activity of Czechoslovak persons at home and abroad, as well as the activity of foreign persons, but only on the territory of Czechoslovakia. The law enables, and provides the prerequisites for, the development of the most diverse forms of economic relations with foreign countries. By defining the conditions under which economic relations with foreign countries may be realized, the law provides expedient and necessary regulation and simultaneously protects the vital economic interests of our country. If asked to define the purpose of the new law comprehensively and succinctly, one would have to say that it is the legal basis for reinforcing comprehensiveness, for the greater effectiveness and better management of all forms of economic relations with foreign countries, and for ensuring the coordinated action of the central organs, for the purpose of achieving the Czechoslovak economy's most effective participation in the international division of labor. In one of the coming issues, the readers of HOSPODARSKE NOVINY will have an opportunity to acquaint themselves in greater detail with the text of the new law, and with commentories on its provisions.

Results and Prospects

[Question] Foreign trade occupies a significant place in the Czechoslovak economy, fulfilling within it a number of important functions. What are its results and prospects under the Sixth and the Seventh Five-Year Plan?

Kostak: The conclusions of the 14th and 15th CPCZ congresses set the task of intensifying the Czechoslovak economy's participation in the international division of labor. This intention stemmed from objective needs determined particularly by the incompleteness and partial depletion of our raw material base, and also by the enormous manufacturing potential that regularly accounts for 2 percent of the world's total industrial output. The set task was fulfilled only partially in the 1970's. Our activity and participation in the process of socialist economic integration have increased. In most cases, however, its results will be evident only later. Far more serious is the fact that our share of world trade gradually declined in the 1970's, as a result of departures from the plan in the course of its realization, dropping from 1.2 percent in 1970 to not quite 0.9 percent in 1979. The export performance of our economy did not increase at the same rate as in countries on a comparable economic level.

Even though the development of Czechoslovak foreign trade was accompanied by favorable trends also in the 1970's, it gradually began to reflect more and more clearly some of our domestic problems. In their sum these problems are evident in export's inability to pay for import, and in the resulting balance-of-trade deficit, and also in the unsatisfactory development of our price ratios.

From the very beginning of the Sixth Five-Year Plan, fulfillment of its export tasks has not been satisfactory. The plan's realization is departing from the original objectives. Nonfulfillment of the set export tasks particularly in the group of machinery and equipment is reflected in the development of our balance of trade. To avoid an intolerable increase of the trade deficit, deliveries of consumer goods, metallurgical products and lumber were mobilized to compensate for the dropout in engineering export. From this listing it is evident that the products in question represent a lower degree of processing and partially require imports of raw materials. Their increased exportation not only worsened the real terms of trade but also reduced the overall effectiveness of Czechoslovak foreign trade.

Even though fulfillment of the export tasks showed partial improvements in the second half of 1979 and also fulfillment this year has been more promising so far, we can nevertheless expect a significant departure from the original target of the five-year plan. For this reason we will be entering the next five-year plan with an imbalance that will be concentrated in the area of our relations with the industrially developed capitalist countries.

In comparison with import, the higher growth rate of export planned for the period 1981-1985 will be sufficient to arrest the further rise of the balance-of-trade deficit. However, gradual liquidation of this deficit will be longer and more complex, for several reasons, than had been assumed initially. The present phase of political hysteria in the United States and Great Britain is evidently worsening the conditions of our economic relations with the industrially developed capitalist countries. In the same region, moreover, the other CEMA countries will be solving the imbalance of their external economic relations, by similar means as Czechoslovakia. In spite of this, however, we are confident that foreign trade and production will be able to jointly fulfill the complex tasks.

Stabilizing Factor of World Development

[Question] A prerequisite for the further growth of material production in the CSSR is our effective participation in the international division of labor, particularly within the framework of CEMA, as an objectively essential factor of intensive development. Under the changed conditions of the world economy, what are the position, potential and prestige of the CEMA countries, and how will this affect the development of international trade?

Kostak: While the CEMA countries accounted for roughly 15 percent of the world industrial output in 1950, their share this year will reach one-third, or even 35 percent by some estimates. Which means that if we add

the other socialist countries and the developing countries that, despite the diversity of their economic development, are united by their anti-imperialist stand, then the forces of socialism, progress and peace account for roughly one-half of the world industrial output. This is of practical significance particularly in the present stage of development when, in conjunction with imperialism's attempts to revive the era of confrontation and cold war, a struggle for the basic trends of the further development of international relations is unfolding with new force.

In this situation it is of exceptional importance to entire mankind that the CEMA countries are not only a dynamic but also a stable and stabilizing factor in the development of the world economy. Just as in the entire preceding period, also in the 1970's the member nations achieved higher rates of economic growth than did the industrially developed capitalist countries. The combined national income of the CEMA countries in 1979 was 67 percent higher than in 1970, whereas the combined national income of the EEC was only 33 percent higher. Industrial output during the same period increased 83 percent in the CEMA countries, but only 36 percent in the EEC.

The CEMA countries' economic stability influences the world economy's development favorably, in two respects. First, the rates of economic growth in the CEMA countries are determined for at least 5 years in advance, they have been stable in the long run, and fulfillment has departed from the plan's target only insignificantly, except in the most recent period. The dynamic and stable growth of the CEMA countries' economies creates conditions favorable for export and import, within the community as well as in the surrounding world.

The world economy's development is influenced favorably also by the fact that the community's relations with other countries are entirely balanced in terms of raw materials, particularly of fuel and energy. Thanks to the enormous mineral wealth of the USSR, the CEMA countries are sharing fourfifths of the world reserves of manganese and apatite, two-thirds of the world reserves of nickel, tungsten and asbestos, one-half of the iron ore, zinc and copper, two-fifths of the natural gas, and one-third of the coal and petroleum. The community's combined output covers its total demand for raw materials. The USSR even has an export potential in this respect. Only in the case of certain nonferrous metals and raw materials for the production of aluminum is it necessary to supplement the CEMA countries' own output with import from third countries. Considering their rates of economic growth, the growing long-term demand, and the structure and distirbution of their raw material resources, however, the CEMA countries must manage their mineral wealth efficiently. Therefore they are stepping up their efforts to reduce the material intensity of their national income.

Korbel: The basic orientation of Czechoslovakia's external economic relations is with the Soviet Union and the other CEMA countries. (It is a known fact that the socialist countries permanently account for more than two-thirds of Czechoslovak foreign trade.) Here the CSSR at the beginning of the 1980's has already traditionally very good trade-policy prerequisites

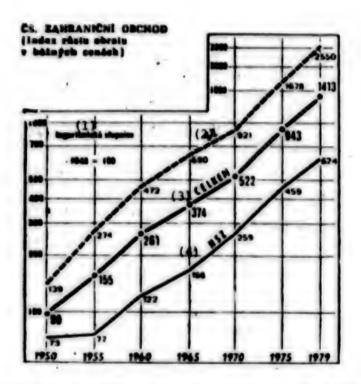


Figure 1. Czechoslovak foreign trade. (Index of the trade turnover's growth, at current prices.)

- Key: 1. Logarithmic scale
 - 2. Socialist countries
- 3. Jointly
- 4. Nonsocialist countries

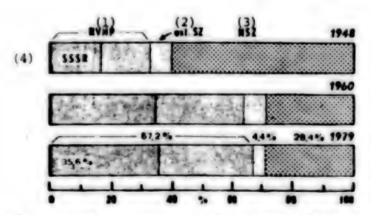


Figure 2. The territorial structure of the trade turnover.

Key: 1. CEMA

- Nonsocialist countries
- 2. Other socialist countries
- 4. Soviet Union

for developing mutually advantageous economic relations. This basic orientation is a decisive stabilizing factor in the planned development of the Czechoslovak economy. Intensification of economic cooperation with the

Soviet Union and the other CEMA countries will remain also in the 1980's the main axis of the Czechoslovak economy's participation in the international division of labor.

The process of socialist economic integration is the basic road for the effective and dynamic development of our economy. The more intensively and on a technically more advanced level these processes take place, the stronger Czechoslovakia's position will become in economic relations within CEMA as well as with the nonsocialist countries.

Regrettably, at the beginning of this decade we are witnessing a pronounced worsening of the trade-policy conditions in East-West trade. Political barriers are being added on a much greater scale than before, to the economic conditions of developing this significant component of international trade. At the present time we are witnessing measures by certain representatives of the Western countries' state policy on foreign trade, measures that are in conflict with the generally recognized rules of international trade. Views are again emerging to the effect that it is essential for the capitalist countries' state policy to impose embargoes, blacklists and other administrative restrictions on trade with the socialist countries.

This policy of embargoes does not enhance the development of the world's productive forces and of international economic relations. Therefore we firmly believe that also in the decade of the 1980's it will be objectively necessary to assert the active elements of worldwide economic cooperation, under the conditions of peaceful coexistence.

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CSO: 2400

CSSR AIR TRANSPORT REVIEWED, OUTLOOK DISCUSSED

Prague PLANOVANE HOSPODARSTVI in Czech No 4, 1980 pp 87-92

[Article by Eng Zdenka Stara, State Planning Commission: "Growth of Air Transportation"]

[Text] Czechoslovak air transportation began to develop intensively after World War II. The increase in international air transportation contributed significantly to this. In addition, the existing airplane fleet was modernized in 1957. Czechoslovakia began to use the Soviet jet planes TU-104 A and the obsolete types (Dakota DC-3, IL-12 and Li-2) were replaced by the Soviet-made aircraft IL-14. The next generation of Soviet planes IL-18 (in 1960) and TU-124 (in 1964) made it possible to extend operations also to those routes on which, because of inadequate airport facilities, TU-104 A could not be used. Air traffic increased even more with the use of long-distance airplanes IL-62 (in 1970) and airplanes TU-134 A for short routes (in 1971). In 1974 the JAK-40 began to replace the IL-14. Beginning in 1971, Czechoslovak air transportation began to use the L-410 planes made by Let Kunovice national enterprise which can also land at airports with unpaved runways.

The increase in air transportation is evident from the following data:

(1)Ukazatel:	1937	1950	1955	1980	1965	1970	1975	
(2)Celkový počet letecky								
přepravených osob v tis. z toho	35	154	222	754	1245	1435	1926	
(3) mezinárodní přeprava	15	23	36	115	270	534	769	
(4) vnitrostátní přeprava	20	131	188	639	975	901	1157	
(5) Celkový výkon letecké								
přepravy cestujících v mil.								
osobových km:	9,2	46,1	93,6	38: 7	789,7	1236	1828	
z toho								
(6) mezinárodní přeprava (7) vnitrostátní přeprava		16,2	32,6	173,8	459,0	919	1405	
· · · · · · · · · · · · · · · · · · ·		29,9	61,0	215,9	330,7	317	423	
(8)Celková průměrná								
přepravní vzdálenost v km		299	422	517	634	861	949	
z toho								
(9) mezinárodní přeprava		704	906	1511	1700	1721	1827	
(10) vnitrostátní přeprava		228	328	338	339	352	388	
(11)Celkový výkon v převedených								
tunokilometrech v mil.			10,3	43,6	88,9	128,7	184,3	
tobo								
(12) mezinárodní přeprava			5,9	23,1	57,0	99,5	146,1	
(13) vnitrostátní přeprava			. 4,4	20,5	31,9	29,2	38,2	

[Key on following page]

Keyl

- 1. Indicator:
- Total number of passengers transported by aircraft (in thousands) on:
- 3. International routes
- 4. Domestic routes
- 5. Total air traffic in passenger-kilometers (in millions) on:
- 6. International routes
- 7. Domestic Poutes
- 8. Average transportation distance (km) on:
- 9. International routes
- 10. Domestic routes
- 11. Total traffic in ton-kilometers (in millions) on:
- 12. International routes
- 13. Domestic routes

A characteristic feature of the development of Czechoslovak air transportation was the fact that the average percentage of increase in ton-kilometers of air transportation service surpassed the world average of increase achieved by the ICAO member states. International passenger transportation accounted for a large part of the total increase in air traffic. While the Czechoslovak Airlines (CSA) maintained regular air connections from Prague with 29 cities in 25 states in 1960, the number of connections has increased to 47 cities in 41 states today.

The airports in Prague, Bratislava, Brno, Ostrava and Poprad (the High Tatra mountains) are used both for international and domestic regular air transportation. An additional nine airports are used for domestic foutes only. Moreover, aerotaxi transportation makes use of several landing areas which are in the care of Svazarm.

The prospects for the development of civil air transportation are handled according to the conditions and principles of the peaceful coexistence of nations and the needs of development of the national economy as a whole, and also in such a way as to consolidate the economic-political line of states of the world socialist system and to assist the developing countries.

The long-term development of air transportation makes absolutely imperative the proportional coordination with other types of transportation. Great emphasis is laid on the continuous increase in labor productivity, reduction of costs and effectiveness of investments.

The guideline for the economic and social development of the CSSR during the 1976-1980 period formulates the basic orientation and goals of civil air transportation as follows: "In air transportation these are to increase safety, regularity and economy; to continue in the rebuilding of key airports, modernization of ground safety equipment and aircraft supplied by the USSR and other socialist countries."

The principles of development of Csechoslovak civil air transportation were approved by CSSK government resolution No 173 of 27 March 1975. The effort to solve transportation problems can be seen also in the fact that they were also dealt with in the resolutions of the presidium of the CSSR government in the 1977-1979 period particularly as to the procurement of equipment and aircraft for CSA, approval of safety measures at the airports and the condition of operating areas at the Prague-Rusyne airport.

The concept of civil air transportation also takes into account progress made in work on the long-term target programs of cooperation among the CPMA member states. At the 33rd CPMA meeting in Moscow the ministers of the respective governments signed the following general agreements on:

routes (among Bulgaria, Hungary, Vietnam, the GDR, Cuba, Poland, USSR and CSSR):

Hungary, Vietnam, GDR, Cuba, Mongolian People's Republic, Poland, USSR and CSSR):

expecting up and putting into operation an integrated complex of automated aystems of seat reservation and sales of tickets for international air townes (among Vietnam, GDR, USSR and CSSR);

-- the joint use of the international scientific-experimental center for sir operations control (among Bulgaria, Hungary, Vietnam, GDR, Cuba, USSR and CSSR);

--research on the establishment of a center for organization (planning) of information flow in the uniform system of air operations' control (between the GDR, USSR and CSSR).

One of the specific proofs of implementation of the program of socialist ecomonic integration is the organization of the joint center for training of fiving and technical personnel and workers in charge of air operations central. The center is being built at Ulyanovsk in the USSR and will peasess its own airport, airplanes, laboratories and necessary facilities for training crews and personnel to operate new types of aircraft, for their retraining and special training, for example in more complex methods of landing under any weather conditions, and for training instructors for air operations control and increasing the qualification of cadres.

In accordance with the resolutions of the 15th CPCZ Congress, the Sixth Fine-Year Plan does not set high growth rates for passenger and freight air transportation, but on the contrary reduces them in order to achieve greater safety of air operations. The plan calls for the building up of a suprehensive system guaranteeing a high level of safety based primarily on the prevention and elimination of the subjective factor in actual

air operations as well as in other interrelated and interdependent activities. The number of flights cancelled for technical reasons will be nubstantially reduced due to the adopted measures designed to increase the number of operational airplanes and to create their necessary reserve.

Busing the Sixth Five-Year Plan, the aircraft fleet was supplemented by 8 JAK-40, increasing their number to 17, by 3 TU-134 A for a total number of 13, one 11-62 for a total number of 7, and the fleet will be supplemented by 3 fl-62 Mk planes. In addition, one IL-18 was acquired from Air Administration of PMV [Federal Ministry of the Interior]. Due to the increasing demands on technical development the investment requirements also increase. We cannot be satisfied with the fact that the utilization of airplanes in terms of time has shown a declining tendency during the Sixth Five-Year Plan. The average time utilization of transport airplanes shows the following values:

(13 Typ	1075	1978	1977	1978	1979	1980	1078	1978	1 000
					(2) plan	1976	1977	1970
JAK 40	2,33	2,79	2,78	2,47	2,80	2,73	66.5	88,8	110.5
17-79	3.46	2,61	2,63	2,12	2,43	2,91	80,8	60,5	137.0
TU: 1344	3.63	4,07	3.93	3.65	3,72	3,67	94.6	98.0	300,5
11-03	4.49	4,00	4,30	4,21	4,17	3,90	65,9	95.0	92.6
12 14	1.23	1.34	1.11	100	400		100	200	100
L-410	000	2,09	1,20	1,25	1,28	1,50	59,8	99.2	126,4
(3) rothom	2,03	2,89	2,83	2,69	2,77	3,00	93.1	95,1	211,5

Key:

- 1. Type
- 2. Plan
- 3. Total

The time utilization of CSA airplanes is counted for the period from the take-off to the moment when the airplane to the the ground in landing, that is the net flying time. On the other hand, the capitalist airlines, which are members of IATA [expansion unknown] international organization, count the flying time from leaving the parking area to the moment of arriving in the parking area. This means that the taxing of the airplane and waiting for the take-off is included in the flying time.

For 1977, nome airlines of socialist states have provided the following data on the average time utilization of planes per day in hours:

Type of aircraft	CSSR	Poland	GDR Interflug	Hungary Halev
IL-62 TU-131 A	4.36	4.3	3.4	3. 35

Although CSA operate airplanes continuously, that is including Saturdays, Sundays and holidays, it is necessary to increase the number of shifts in

maintenance and repair of aviation equipment, and to achieve more effective utilization of airplanes by operating and commercial units. The targets of the fixth Five-Year Plan were met in individual years in the following way:

(1) Ukasatel	1978	1977	1978	1979	1980	1976-	1900
100					pián	1979	1978
(2) Columns point letecky							
propensenych coob v (ta.							
(3) ataini plan	1990	1.9000	2000	2000	2000	7800	105.3
(4) Bospodářský plán	1875	1800	1883	10.63		7557	
(5) ekutednost	1.600	1760	1920	2009		7489	1.6
(A) a tuho							
(?) memarodal preprava (8) vanirostami preprava	726	748	760	828		3034	
(8) vniirosiātni přeprava	1072	1043	1160	1161		6455	
(9) Co.kuyf veton leteche							
proprovy costulicich							
w mil coam							
(1D) enatur plan	1860	1860	1820	1940	1950	7450	100.6
(1.1) hospodářský plán	1798	1701	1210	1894	0000	7002	800,0
(12) shutefnoot	1057	1705	1013	2003		733A	
			0000			7 330	
(14) meanarudal preprave	1200	1320	1461	1000		5656	
(14) mesinārudni preprava (15) vnitromātni preprava	288	379	452	483		1682	
(16) Celhové průměrně pře	-	37.5	636	-			
proval vidilionist v km							
(17) pratni pian	979	679	935	970	975		
	927	912	934	994	9/9		
(18) hoopedafeky plan 19) sautočnost	921	989	996	1027			
	901			3007			
(20) tobe	0.000	1847	2000	1000			
meginárodní přeprava (2) vnitrostátní přeprava	362	384	1922	1932			
	302	351	890	392			
123 Scale of Vero							
e precedentch							
tunck ametrech v mil							
Lat hospodirely pinn	174.8	173.3	177.7	195,6	100,5	721.4	106,6
(25) skutečnost	166,2	172,8	102,2	205,6		738,6	
l o le tota							
(28) messas odni přeprava	133,0	138,0	192.4	185,0		500,3	
(28) voitrosiáini přeprava	35,2	33,7	39,8	40.8		140,3	

Ker

- 1. Indicator
- 2. Total number of passengers transported by aircraft (thousand) according to:
- 1. The state plan
- 6. The economic plan
- 5. The reality
- 6. On
- 7. International routes
- 8. Desertic routes
- 9. Total volume of air transportation of passengers in passengerbilometers (million)

[Key continued on following page]

- 10. According to: the state plan
- 11. The economic plan
- 12. The reality
- 13. On
- 14. International routes
- 15. Domestic routes
- 16. Overall average transportation distance in kilometers according to:
- 17. The state plan
- 18. The economic plan
- 19. The reality
- 20. On
- 21. International routes
- 22. Domestic routes
- Total traffic volume converted into ton-kilometers (million) according to:
- 24. The economic plan
- 25. The reality
- 26. On
- 27. International routes
- 28. Domestic routes

This summary reveals that 7,489,000 persons were transported by air during the first 4 years of the Sixth Five-Year Plan which represents 99.1 percent of the sum of annual plans and 96 percent of the state plan fulfillment. The freight transportation volume amounted to 738.6 million ton-kilometers and thus exceeded the total of annual plans by 2.4 percent. The overall improvement during the 1976-1979 period was brought about by the good results in 1978 and 1979, when the plan targets were surpassed.

A typical feature of the development during the Sixth Five-Year Plan has been a slowdown of the growth rate which was due to the increase in the world prices of aviation fuel at the end of 1973 and beginning of 1974, an increase in the cost of services and other expenditures abroad, a gradual increase in the depreciation allowances for the new types of aircraft purchased at substantially higher prices and the installation of radionavigation, radiolocation and communication equipment at the airports and along the flight routes.

The increase in cost resulting from the use of new aircraft is evident from the increase in the price of a seat in these airplanes:

(1) Typ letadia	(2) Provoz v letech	(3)Počet mist	(4) Pofizovací cena v mil. Kčs	(5)Na 1 sed. v tis. Kčs	(6) spotf. na 1 hod. letu/litr
1L-14	1957-75	40	4,5	113	690
TU 124	1984-71	50	11,0	198	
TU-104	1957-74	80	17,5	219	7 080
11-18	1980-80	105	24,7	235	3 480
L-410	1971 - 45	17	7,6	447	370
TU-134A	1971-	76	51,0	671	4 140
JAK-40	1974-	32	21.5	672	1 790
IL-62	1909 —	168	120,0	714	10 480 \
IL-62Mk	1979 —	168	134,0	798	9 440
L-410UVP	1985	15	12,0	800	0 000
JAK-42	1984	100-120	90,0-100,0		
IL-80 ·	1988	250-350	250,0	1 000	

Key:

- 1. Type of plane
- 2. Used in years
- 3. Number of seats
- 4. Purchase price in million Kcs
- 5. Per seat in thousand Kcs
- 6. Average consumption of fuel per hour of flight (liter)

If we assume that our airplane fleet will be augmented by 3 JAK-42 and 5 L-410 UVP planes during the Seventh Five-Year Plan and 10 JAK-42 and 3 large-capacity Soviet-made airplanes of a new type (IL-86) for long-distance routes and medium-distance routes with heavy traffic during the Eighth Five-Year Plan, then we can expect that the price of one seat will rise from Kcs 585,000 to Kcs 786,000 or approximately 34 percent during the 1980-1990 decade. The modernization plan for the airplane fleet anticipates the replacement of existing planes by the large-capacity types and a gradual reduction in their number. Just as in other sectors of the national economy, it is also necessary to enact measures in air transportation which aim at the reduction of fuel consumption and improvement of economic effectiveness.

Within the long-term program of reducing fuels and energy consumption it was ordered to explore the possibility of replacing air transportation in the domestic transport system by long-distance bus transportation and thus to reduce energy consumption. In view of the fact that the construction of the continuous stretch of the Prague-Brno-Bratislava superhighway will be completed by the end of 1980, it is anticipated that air traffic will be reduced by 70 percent or 110,000 passengers on the Prague-Brno route and by approximately 10 percent or 35,000 passengers on the Prague-Bratislava route. The fuel consumption should thus be reduced by 5,352 tons or 7,876 tons of standard fuel. Traffic will also be reduced on some other domestic routes and unprofitable CSA international routes.

During the Seventh and Eighth Five-Year Plans only a slight increase in air service is anticipated to be achieved exclusively through the more intensive use of present planes and putting into operation new types of large-capacity aircraft.

The primary purpose of air transportation is to carry passengers over long distances. For this reason, the growth rate is higher in international traffic, particularly to the socialist countries.

The network of CSA international routes provides connections between the CSSR and all European socialist countries and selected countries in Asia, Africa and America.

Both scheduled and charter service to the socialist countries has been virtually completed and traffic on these routes will be expanded by increasing the number of flights and employing new large-capacity planes. Charter air transportation to the socialist countries will concentrate on those countries with which we have an unfavorable balance in tourism.

Transportation on the routes to the European socialist countries is carried out at the prices set by the uniform tariff of fares for passenger transportation (EAPT) and of charges for freight transportation (EAGT) which are part of the multilateral agreement on noncommercial payments. These tariffs have been in effect since 1963 and are applicable to the citizens of participating socialist countries. The signatory countries account for 96 percent of passengers. These tariffs were increased on the average by 8 percent as late as last year, but this revision was far from covering the rising costs of operation which are reimbursed as part of commercial payments, that is with VRCV [general revision of wholesale prices] upcharge, while the transportation charges are billed as part of noncommercial payments. This results in a loss which increases proportionally to the increase in transportation service. Most of the participating countries are against the increase in passenger fares, although in the future the gap between the existing tariff and operating costs must be narrowed and the ways must be found to render operation more profitable.

Although, due to increased traffic and increased prices of fuel the loss resulting from air transportation to the socialist countries will increase, these routes show a permanent foreign exchange profit from the transit transportation of passengers and freight charges paid for in currencies of the capitalist states.

CSA has maintained regular air transportation to Cuba since 1962. The Cuban airline Cubana also has been trying to secure approval for the application of the above mentioned reduced tariffs (EAPT and EAGT) applicable to the socialist countries. If this approval is eventually granted, the amount of receipts will be reduced and the total loss will approximately double. The present loss on this route is due to the low ratio of receipts (for transportation of foreign passengers paid for in the currencies of capitalist states and the high ratio of operating costs paid for predominantly in the capitalist currencies). Because of the increasing number of Czechoslovak tourists visiting Cuba, the special reduced 1974 tariff was gradually increased beginning 1976. The Seventh and Eighth Five-Year Plans anticipate a more effective utilization of

planes' carrying capacity due to the increasing number of tourists and expansion of economic relations between the two countries.

Since the friendly relations and cooperation between the CSSR and socialist Vietnam have intensified, regular air connection between the two states is under consideration. The problem, however, is financing the financial and foreign exchange loss which would result from the operation of this route.

While the CSA routes to the European capitalist states are profitable, the long-distance routes to North America, the Far East and West Africa remain unprofitable. The basic expansion of regular CSA routes to the capitalist states was essentially completed during the Third Five-Year Plan with the exception of the North American route, which was opened in 1970.

The overall evaluation of all CSA international routes to the nonsocialist countries must also take foreign policy criteria into account. The discontinuation of some routes for economic reasons could adversely affect the present scope of mutual cooperation and foreign policy relations. This particularly applies to the air routes to the Far East and West Africa.

CSA sharter flights on international routes whose prices fully cover the operating costs will increase in accordance with the long-term forecasts by travel agencies based on the anticipated increase in tourism.

The losses sustained by Czechoslovak civil aviation will force it to find ways to reduce the need for subsidies from the state budget not only by revising present tariffs, but also by better utilizing the fleet and uncovering reserves in the work organization of operating, commercial and technical units.

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ROLE OF METAL WASTES AS A RESOURCE EMPHASIZED

Prague HOSPODARSKE NOVINY in Czech 17 May 80 p 6

[Article by Miloslav Budirsky, LL.D., Cand. Sci., Director of the Metal Wastes Industry: "New Regard for Old Iron"]

[Text] The need for the utmost economy has become imperative all over the world. Czechoslovakia is no exception. The urgent necessity to effect savings manifests itself in our case, a country with a developed mechanical industry, particularly in the management of metal sate.

The significance of metal waste to the national economy was emphatically reiterated by the resolution of the 15th Congress of the CPCZ and, later again, by the resolution of the 3rd plenum of the Central maittee of the CPCZ. The resolutions call for stepped-up collection and processing of metal waste and the maximum possible utilization of metal. Metal waste is rated in party documents as an exceptionally important component of the raw material base of Czechoslovak metallurgy.

Half of All Steel Made of Scrap Metal

The time that elapsed since the acceptance of the above mentioned documents has in no way affected their topical importance. On the contrary. The economic importance of metal waste is still increasing dramatically. One of the reasons for this permanent trend is price increases on capitalist markets. From 1970 until the autumn of 1979 the price of iron ore increased by 57 percent, that of copper by 56 percent, aluminum by 138 percent, zinc by 160 percent, lead 'y 380 percent and tin by 388 percent, and, with the exception of zinc, the most significant increase occurred over the last few years. Just the increase in the price of iron ore on nonsocialist markets alone drains almost a quarter billion korunas in foreign exchange each year.

This serves to underline the fact that metal waste, which is a domestic resource, accounts for 51.8 percent of Gzechoslovak steel production and 72.2 percent of nonferrous metals production. This fact is not fully appreciated at all times and by all people. The designation scrap metal is still even linked in the public's mind with the notion of something worthless and almost merges with the word junk. However, that notion is grossly mistaken.

The substantial value represented by waste metal is enhanced primarily by the fact that it is an accessible resource. This is of extraordinary importance today and will be of inestimable importance in the future. If the global increments in the consumption of metals remain at their present level (3 to 6 percent), it is estimated that the world's resources of tin will last approximately 20 years, those of lead 25, zinc 30 and copper 50 years. And, due to their outstanding utilitarian properties, some metals are at this point irreplaceable in some types of production (tin in the canning industry, copper in electrical engineering and electronics, etc.). And as this concerns areas that are growing, there is only one thing we can do: manage the resources we do have well. Keep recycling the metals that are at our disposal. In other words, deliberately and with proper perspective improve collection and processing of metal waste.

Metal waste is also a cheap raw material. It contains almost 100 percent mental, while the metallic content of ores is substantially lower. In the case of iron ore it averages 55 percent, in zinc 5-6 percent, in lead 2-3 percent, in copper 0.5-1.0 percent, and in the case of tin as little as 0.2-0.6 percent.

Nine-Tenths Saved

Production costs in the production of metal and alloys from metal waste amount to merely 10-15 percent of the costs required for producing metals from ones. Equally favorable are the effects on investment costs for the construction of production facilities. At comparable output, the investment cost for plants processing metal waste is five times lower than for building a metallurgical plant processing ore or concentrates, as a number of operations indispensable for converting ore to metal can be eliminated.

By producing a ton of iron from metal waste we save 0.5 tons of quality coal for blast furnaces, 2 tons of iron ore, investment means in the amount of Kcs 5,000, 27 working hours and 10 percent of melting time. The annual supply rate of 3 million tons of scrap iron represent a saving that cannot be nembered. We talk of savings on the order of 1.5 million tons of bituminous 1, 6 million tons of iron ore, several thousand units of manpower and investments in the amount of Kcs 15 billion.

Processing metal waste shows itself to be effective also from other viewpoints. The metal yield of ready products is higher than that of products made of ores. The ratio of intermediate products and hard to process wastes, such as slag, sludge and flue dust is substantially lowered. And as the processing technology is also simpler in comparison with primary metallurgical production, the requirements on operation, maintenance and replacement of production facilities are also reduced. In addition to its economic effects, this is positively reflected in the formation of the living environs, in working conditions and in work hygiene.

Hidden Energy Reserves

With increasing frequency, metal waste is nowadays also referred to as a raw material for energy. This is not entirely without merit, even though this designation may, in just a cursory examination, appear to be exaggerated. It is true that metal waste does not yield any energy. The truth, however, is that it serves to conserve the amount of primary energy expended on conversion of ore to metal primarily in the form of coke which is in short supply and, in the case of aluminum, electric power. This propensity is of extraordinary importance particularly now that economic utilization of energy has become one of the basic conditions for dynamic development of the economy. How substantial are the energy savings derived from use of metal waste in the production of metals is shown by the comparison presented in the following table.

	Energy in	n of Primary Processing per ton)	sing Waste Pro		
Metal	from ores	from waste	kWh/t	percent	
Steel	16,000	7,500	8,500	53.1	
Copper	13,500	1,700	11,800	87.4	
Lead	9,500	500	9,000	94.7	
Zinc	10,000	500	9,500	95.0	
Aluminum	65,000	2,000	63,000	96.9	
Magnesium	90,000	2,000	88,000	97.7	

Metallurgical production in this country ranks, without a doubt, among the prime consumers of electric power. Any significant saving that can be effected in this industrial branch affects the energy balance of our country. Energy savings due to utilization of metal waste are unquestioningly remarkable. Electric power savings in the production of steel from metal waste, recomputed to global supplies by the Metal Waste Industry to metallurgical plant, contributed 26.5 billion kwh to our national economic in 1979. In the case of nonferrous metals the result for the identical period can be realistically estimated at 3.7 billion kwh.

Positive effects of intensive utilization of metal waste also affect transportation. Over 3 million tons of metal charge in the form of metal waste replaces at least twice their volume of ore concentrates, also saving fuels that would have to be transported to our metallurgical plants from considerable distances over the busiest transportation routes. Thus, supplies of metal waste to metallurgical plants alleviate the complex situation in railroad transportation, as they decrease the transportation volume up to 3 times and, moreover, lead to distinctly shorter transportation distances and an accelerated circulation of rolling stock.

Slow Rate of Amortization Scrap

Expansion and intensification of metal waste collection and processing are not only economically advantageous, but in view of the global competition for raw materials and energy they are also indispensable. This fact is also clearly reflected in the last party resolutions regarding improvements in the system for controlling the national economy. The requirement for maximum economy, particularly as regards fuels and raw materials, confronts the metal waste industry with even more formidable tasks.

The primary task is a systematic mobilization of reserves. The problem of amortization waste is becoming the key factor. Any desirable increase in the available fund of metal waste depends therefore on substantial increases in the increments of amortization scrap. The task calls for the timely liquidation of obsolescent production means, that being the key approach to accelerated recycling of metal. Currently the turnover rate in the available fund of metals is unsatisfactory. Basic production assets keep aging. In 1979 their average service life was 26 years. That is an unacceptable state of affairs, particularly from the viewpoint of requisite modernization of production assets in our national economy. The remedy, which would also bring about an increase in metal waste sources in the Seventh and Eighth Five-Year Plans, consists primarily in providing adequate stimulation that would lead to an accelerated liquidation of ineffectual basic fixed assets in all production branches.

A significant source of metal waste is also its collection among the populace, organized by the Raw Materials Collection concern. Metal waste derived from this source represents over 16 percent of the overall volume. In 1979 it amounted to 499,000 tons of ferrous and 22,000 tons of nonferrous metals. But even here the final limit is far from having been reached. Still unexploited possibilities offer themselves not only in the organization of the collection effort, but mainly in introducing new technology and processes into metal waste processing.

Technology Upgrades Waste

Modernization and technical progress are in general the basic condition for continued increases in the volume, productivity of labor and metal yield in the metal waste industry. First in line is particularly technology for rushing and separation of impurities from scrap steel on shredders, which can be used for processing discarded automobiles and industrial goods from Louseholds. In addition to 80 percent pure steel scrap, it is possible to obtain in this manner 15-20 percent nonmagnetic fraction from which it is possible to obtain a yield of up to a further 11.5 percent of nonferrous metals. Assuming that this technology were to be used in 1985 for processing 280,000 tons of impure steel scrap, in a single year the national economy could accrue savings of roughly 4,000 tons of aluminum, 1,000 tons of brass, 770 tons of zinc, 440 tons of copper and 265 tons of lead amounting to approximately Kcs 62 million. At the current state of the art, these valuable raw materials are shipped together with scrap metals to steel plants where they

are irretrievably lost. Moreover, admixtures of copper and tin adversely affect the quality of newly smelted steel, as they cause brittleness in rolling and formation of recrystallization temperatures.

Expansion of briquetting and baling of metal cuttings could produce annual savings of 11,500 MWh of electric power. It would free 7,500 cars for railroad transportation, improve the output of steel-making furnaces, improve material handling and working conditions.

We also intend to systematically introduce new technology into the processing of nonferrous metal waste. Particularly topical is the implementation of new methods in the processing of battery lead, where taxing manual labor constituting a health hazard still predominates. The expected purchase and processing of 400,000 automobile batteries in 1985, together with the growing ratio of maintenance-free batteries in polypropylene casings could not take place without the introduction of new and efficient processing lines. Analogous solutions will be sought for the manufacture of cables and insulated conductors, sorting of aluminum waste connected to iron, the problem of tin separation, and others.

We stand at the threshold of a new stage of rapid implementation of new technology in the metal waste industry. There has been a change in attitude as regards the importance and the position of this branch in the national economy. Its contributions are acknowledged, particularly under the current adverse economical conditions, and its needs therefore meet with understanding by the highest party and state organs.

Even though it involves an expensive investment program, there is a guarantee that the expended means will soon pay for themselves and improve the quality as well as quantity of the metal saved, save energy, improve productivity and the amenities of labor and, last but not least, enhance the living and working environment.

Obsolescent legal norms are also inadequate under the new economic conditions. They are not conductive to forming the needed prerequisites for proper management of metal waste. In comparison to analogous regulations in other socialist countries, they are inadequate and unsatisfactory for our current needs. On the basis of experiences gained in the USSR, the GDR and other socialist countries, we should first of all speedily implement state control of metal waste management, sanctions for infraction of regulations in force, and the obligation of large producers to supply metal waste to the storage facilities of the Kovosrot concern.

These are the key problems and tasks facing us in the Seventh Five-Year Plan. A number of them we will be able to tackle ourselves. Others exceed our resources and will require the understanding, cooperation and active help of higher authorities. We pursue a common goal. That goal is to contribute to an efficient, effective and economic recycling of metals in the national economy and to preserve for future generations the riches hidden in the country's available funds of metals.

8204

CSO: 2400

GERMAN DEMOCRATIC REPUBLIC

RECENT PRICING, PLANNING MEASURES ASSESSED

Frankfurt/Main FRANKFURTER ALLGEMEINE in German 28 May 80 pp 11, 12

[Commentary by Hans Herbert Goetz: "On the Way to the Next Party Congress: On the Economic Policy in the GDR"]

[Text] Everyday political life in communist countries is a permanent "countdown": there are always just a few more months, weeks or days to the next commemoration of Marx or Lenin, to the next political jubilee, and, above all else, to the next party congress. And up to that time, "obligations to compete" in honor....

Not even a year has passed since the festivities on the occasion of the 30th anniversary of the establishment of the GDR reached their climax, and now once again the countdown for the next SED party congress, which is to take place in the week before Easter week from 11-16 April 1981, has started. It will be the 10th Party Congress, thus a jubilee party congress, and there are no limits to the political imagination as to how it is to be celebrated. Now starts the worthy "preparation," reaching right into the enterprises, preparation chiefly in the form of obligations to energetically increase production and especially productivity in honor of the 10th Party Congress.

The party leadership in Leipzig Bezirk has issued the slogan: "On Course to the Party Congress--Plan Plus Two"; this means the obligation on the part of all enterprises to produce, primarily from material saved, 2 additional days' worth of production during the current year. This economic initiative hits the bulls-eye straight on, as SED General Secretary Honecker stated in an introduction to the most recent meeting of the SED Central Committee. Can this very ambitious goal be achieved? What does the economic situation in the GDR look like in the last year of the current five-year plan? Can new elements be discovered in GDR economic policy?

The past 1980 started out very well as far as the weather is concerned, the weather is always more important in planned economies than elsewhere. In contrast to the latastrophic winter of 1979 which had caused severe damages and production always, last winter was mild and at the 12th Plenum of the St. Central Committee last week there were reports from the various GDR begins about substantial increases in production in the first few months, of course, this statistical growth does not mean much, because in the comparable period of the previous year the GDR was totally occupied with balancing out production losses.

Social supplying of the population is guaranteed, for the most part even at atable prices of prices which have risen slightly, but the so-called "luxuries and semiluxuries have gotten substantially more expensive and, of social, much scarce relitbure did not conceal this state of affairs from the central sellter. Heny products which were always around have addenly disappeared. Why? The goods margin has thus gotten considerably smaller primarily because the GDR has been forced, in view of the abortage of foreign exchange, to export "like mad" everything that can be experted at all: not only to the West, but also in the direction of the Soviet Union, the decisive supplier of energy and raw materials. Even in immer erman trade, deliveries by the GDR this year have thus risen significantly.

In terms of its overall economy, the GDR is in a situation similar to that of the FROT its terms of trade have worsened drastically, it must export more and more in order to import the same amount of raw materials and energy. In the FRO, mainly the economic experts are occupied with this dev lapment; the citizen feels it for the time being only indirectly. It is quite different in the GDR where the worsening of the terms of trade is reflected directly in the reduction of the supply of goods which is more than just aggravating. Thus, the party leadership and government are pendering how to cope with this situation. They deplore, partly in drastic, even dramatic phrases the inadequate export capability, the missing push in productivity or the lethargy in the interprises which naturally have long nince become tired of the endless exhortations and which to date have also ye found ways and means to fulfill their plan tasks.

Thus, for several months the GDR Legal Gazette has become interesting tealing for the observer of economic policy; for there is officially "a ballstorm" of new regulations. They primarily concern two sectors:

1. arganizational measures in industry, and 2. prices and their "substitut" in the planned economy, the indexes for the enterprises. There is an internal connection between them; they are supposed to force the enterprises and workers into greater output at less cost. With some exagger, tion it could be said that the planned economy is seeking once again to 'discover' the significance of costs and—for the nth time—to put an end to the "tomage ideology" which goes like this: "Produce with as much effort and as great cost as possible, then the chief goal will be achieved, fulfilling the plan target."

in 1977, in his speech in Dresden, Honecker announced a new development of concentration in Ubh industry. This process is complete, and Gak industry is now atructured in 179 industrial combines, with that, greater clarity in the industrial structure has been achieved which will lighten the planned economy leadership tasks. This restructuring simultaneously gave additional responsibility to the "general directors" of the combines, first on poper, stated in numerous decrees, particularly in the sector of price formation, but also possibly in the export sector. The ideal goal of the SED would of course not be to release the leadership of the combines from atrict control by the plan commission and industrial ministries, but at the same give them the flexibility in the guidance of production and price policy which "capitalist entreprenours" have. The general directors have been provided with a "manager of the department for prices," who has been given certain special powers, and it may be assumed that, in this organizational measure, a realization of the principle is to be seen which Honocker once formulated in these words; "In the formation of the combine it is not only a matter of organizational change, but also of a far-reaching economic and political process."

In these new "freedoms"--if they really are that--the combines must have practice without causing distrust "upstairs," and it will have to become apparent in the next few years whether a large number of these industrial conglomerates will be in a position to achieve those peak enterprise performances, as for example Zeiss, Jena or some few others which are always mentioned, have long since been able to produce. The SED naturally have that in its industrial enterprises--as well as in agriculture-- "reserves in new magnitudes could be developed" if only they had the appropriate method.

Chairman of the State Planning Commission Gethard Schuerer last week gave his colleagues from the Central Committee a kind of tutorial class concerning how the "problem of assessing performance" might now be solved. With downright disarming openness he showed what damages the clearly ineradicable tonnage ideology causes in practice and why it was not possible to achieve the indispensable lowering of costs and economic use of materials with existing methods. Out of the bottomless box of tricks of the planned economy the Politburo some time ago pulled out a new combination of enterprise indexes in which production volume no longer plays the only decisive role, but also material costs. Whoever consumes less material, according to Schuerer, creates a "larger new value," and this higher value is advantageous for the economy, for the combine, for the enterprise, indeed for the individual brigade to fulfill and exceed their plans. That is how simple it is.

If the SED could actually achieve the lacking "stimulation" of every individual at the place of work through the use of this "comprehensive" application of enterprise indexes, then, of course, an ideal goal would be reached. But to date, planned economies have struggled in vain for this as long as they have been in existence. From the point of view of

the system of the market economy this means: correct prices, which do not exist in planned economics and which are not allowed as they reveal economic scarcity, and profits with all their overall economic functions cannot be replaced, either by new decrees on price formation as they now exist in countless quantities in the GDE, or by new enterprise indexes.

in the GDR a new course has been set for the planned economy for the next five-year plan (1981-1985). Planning in the meantime has been adjusted to living with constantly rising costs for raw materials and energy and to raising industrial prices every year. It is worth noting that the Eastern bloc countries, to the extent they are poor in raw materials and are thus dependent on the Soviet Union, react in very different ways to the "new situation." This means that clearing prices are becoming increasingly unreal, more fictive, and the possible advantages of any "integration" can be utilized even less than before. The supply of goods in the GDR will remain tight, and the phenomena of a socialist "stemmed inflation" (Roepke) will become increasingly clearer. The party leadership has repeatedly characterized the overall economic situation as "completely new," on the other hand the instruments of the planned economy are scarcely different.

12124

REPORTS OF HISMANAGEMENT, ATTEMPTED CORRECTION ANALYZED

West Berlin DER TAGESSPIEGEL in German 24 May 80 p 3

[Article by Michael Mara: "Planning Bureaucracy Burdens GDR Economy; Enormous losses Through Incorrect Decisions -- Quality Goods Are for Export"]

Text) Before a group of party functionaries Erich Honecker recently gave assurance that "we are constantly doing a better job of showing the advantages of socialism." Many GDR citizens doubt this in view of the fact that 35 years after the end of World War II there "is something wrong everywhere" in the supply system and difficulties in the production enterprises are increasing rather than decreasing. An annoyed person from Leipzig wrote to the party newspaper in the city of fairs that for a long time he had been trying to buy an efficient stereo system: "I almost feel silly when I state my desires. But why should I reproach myself? It has long since become apparent that our industry underrated the development of entertainment electronics and the little good stuff that we produce is still being exported...."

This letter of complaint is one of many similar ones which have recently been received by the media and by the offices responsible for supply. In conversations and in letters to relatives in the West, GDR citizens often make even more drastic comments about the fact that it is obviously increasingly more difficult for GDR industry to satisfy the needs of the people adequately. A person from Mecklenburg wrote from a kreis city in Neubrandenburg Bezirk to his relatives in West Berlin: "Our situation in respect to supply is catastrophic and improvement cannot be expected." For months he had scoured businesses in the entire bezirk without success in order to get hold of an exhaust system for his Trabant and a drilling machine.

Even from the official side it is conceded that in the GDR there are supply bottlenecks and the economic situation overall is "serious." "Radio GDR" recently claimed that the steadily worsening conditions in capitalist markets are responsible for this. Prices in these markets have gone up steadily and confront us with new problems every day." Anyone refusing to admit this misunderstands the "real situation." In

the opinion of the party's own LEIPZICER VOLKS. LITUNG, GDR industry can "not yet meet" ven "normal" needs of the sitizens. "Complicated world economic conditions" are one reason for this. For example, essential consumer goods in the GoR would have to be sold abroad "in excess of planned exports" in order to balance out sudden price increases for raw materials. That hurts, but it is a "hard economic reality."

Of course, it is also a hard reality that many problems in production and suply can be attributed less to the "growing foreign trade burdens," as the media like to claim, but rather are caused, or at least aggravated, by deficiencies in the economic system. For example, errors in management and planning, bureaucratic and wrong decisions still have a disastrous effect; they prove that the SED thesis of the ostensible superiority of the socialist planned economy over the free market economy is a lie.

Thus, functionaries in Rostick Bezirk are directing that the fuel quotas which were not used "as planned" by agricultural enterprises in the first quarter of 1980, that is, in the deep of winter, have been "forfeited" for the second quarter, although it is precisely in this period that the main part of the cultivation work is done and the fuel planned for it is not sufficient. On the other hand, enormous quantities of fuel are wasted. Every day large columns of cars are on the roads in the CDR simply because enterprises and private persons hope to get hold of urgently needed replacement parts and scarce goods in other bezirks and very distant cities. The routes which supplies and other goods take are very tortuous. For example, construction materials which are needed by the 700 construction workers assigned from Neubrandenburg Bezirk to "rebuild the capital of the GDR" are transported from the south of the GDR past East Berlin to the headquarters of the workers in Mecklenburg, and then from there back to East Berlin.

Or another example: The council of Hoehnmoelsen Kreis (Halle Bezirk) issues construction permits for owner-occupied dwellings in an area that has been set aside for coal mining. The mistake is not noticed until the buildings have been finished on the outside. In spite of lacking construction capacities and materials they must now be torn down and erected again at another location. Such breakdowns and foolish actions are the order of the day in the GDR, as generally the bureaucracy produces the wildest phenomena. One cause of this is, as confirmed by the secretariat of the SED Rostock Bezirk directorate in a report which was rather blunt, the "inability" of functionaries "to understand party resolutions and to make decisions which are politically as well as technically justified."

However, if things never work out, it is not only because of the inability of the functionaries. The planning system itself is urgently in need of reform. The satirical East Berlin weekly EULENSPIEGEL recently provided conclusive proof of this: the Bernsdorf Wood Construction Works VEB took to heart Homecker's serious comments that decisive improvement in the material economy had become a decisive prerequisite to dynamic economic

growth, and developed a method which makes it possible to manufacture more products from the same amount of imported aluminum and decrease the amount of scrap, thus to work more profitably. But, according to the EULENSPIEGEL, because it then "produced" less scrap and no longer fulfilled the "scrap plen" in respect to the plan position for secondary raw materials, the responsible ministry "looked askance at it, as it would at one in arrears in respect to the plan." The ministry insisted that the "planned" scrap had to be delivered.

Thereupon a worker in the factory wrote to the minister that in view of the stubbornness with which delivery of large quantities of aluminum scrap is demanded, he had the impression "that the colleagues and comrades are regularly required to produce scrap at any price." He did not receive an answer; instead, his enterprise, with the approval of the ministry, was sued by a state metal processing enterprise because of missing scrap deliveries and this is the point of the story, was given a stipulated fine of M22,000 by the contract court in Cottbus. Not until the VEB in Bernsdorf took vigorous exception to this, citing Honecker's challenge, was the fine rescinded; however, the enterprise has to pay for the costs of the suit.

It is obvious that in the GDR, because of these and similar bureaucratic abuses, the demand is heard more and more often to bring about radical change here. Even in the party leadership this appears to be recognized to an increasing extent. Honecker, in his important speech before the first kreis secretaries of the party underscored the fact that "higher demands" must be placed "on central state management and planning." He pleaded especially for a real assessment of performance: "Whatever is of use for the economy must also be advantageous for the combines and enterprises. Thus, if combines and enterprises produce more finished products with fewer raw materials, less energy and other material, then that should be reflected in a more strongly positive manner in their qualitative and quantitative indexes. Only then is there actually an orientation toward output which is of value economically, and that is the key problem."

In the meantime the method of plan accounting and assessing output has been altered. Until now, in the rigid planned economy of the GDR the decisive index for fulfilling the plan had been goods production in terms of value and quantity, respectively. Quality played hardly any role, cost development, as "Radio GDR" admitted, was "concealed": while high costs make fulfilling the plan in terms of value easier, declining costs resulted in the plan not being met. If, for example, a construction enterprise used less than the planned costs for a building because of M50,000 material savings and rationalization, its plan was deemed not to have been fulfilled in terms of value. That resulted in the fact that the construction enterprise had absolutely no interest at all in building more cheaply.

In the future now, on the basis of a resolution by the SED Politburo and the GDM government, in addition to goods production, so-called net production (the actual share of the enterprise in the product) and the material costs will be used as a basis in assessing how the plan is being fulfilled. As "Radio GDR" believes, this "further-developed" method of plan accounting will make "the output of an enterprise more obvious and will give more realistic substance to fulfilling the plan." Yet it might not be so simple as all that. Basic reform would also be necessary, a radical cure of the planning system. Whether the SED is ready for that is another subject.

12124 CSO: 2300

MORE EFFICIENT USE OF ENERGY IN AGRICULTURE STRESSED

West German Commentary

Bonn IWE-WIRTSCHAFTSDIENST in German Vol 21 No 16-17, 15 May 80 pp 6-7

[Unattributed article: "Academy of Agricultural Science: More Efficient Use of Energy in Plant and Animal Production Used"]

[Text] Last April, in a plenary session, the GDR Academy of Agricultural Sciences discussed the results obtained, and the tasks still to be accomplished in reducing the specific energy consumption of plant and animal production, and possible uses of nonconventional forms of energy. In five working groups, the scientists discussed in detail energy-saving processes for plant, animal and fodder production, breeding possibilities, and the development of alternative energy sources. As in other economic sectors, technical solutions for heat recuperation exist also in agriculture. Several animal production enterprises (livestock raising) are considering utilizing the ambient heat from stables or the heat energy obtained during milk-cooling, using adequate units, for heating or for the production of hot water. Experience to-date shows that milk-cooling produces, per cow, enough energy to raise to 50°C the temperature of 10 liters of industrial water. Certain installations are experimenting with heat pumps to recover energy from liquid manure, or with collectors to capture solar energy which is then used to air-condition stables or to produce hot water.

At the suggestion of the president of the Academy, the plenum determined to cooperate in preparing a complex program to reduce specific energy consumption and to utilize nonconventional forms of energy in agriculture.

Agricultural Academy Suggests Measures

East Berlin NEUE DEUTSCHE BAUERNZEITUNG in German Vol 21 No 18, 2 May 80 p 6

[Article by Manfred Grund: "From Equipment Couplings to Biogas; Academy of Agricultural Science Conferred on Ways of More Efficient Energy Utilization in Plant and Animal Production"]

[Text] If agriculture and the foodstuff industry could further rationalize their use of fuels, heating oil, coal and electricity, this could have

extremely important consequences for our national economy as a whole. This is why, last week, in a plenary session, the GDR Academy of Agricultural sciences discussed the results obtained, and the tasks still to be accomplished in reducing the specific energy consumption of plant and animal production, and the possible use of nonconventional forms of energy. In his report, Prof Dr Klaus Algenstaedt, director of the Schlieben-Bornin research center for mechanization in the acriculture, drew attention to the many existing possibilities, from the application of fuel-saving technologies in farm work, to the recuperation of heat from the ambient air of stables, and the development of vegetable varieties resistant to cold. During the discussion, Bruno Kiesler, member of the SED central committee and director of its agricultural division, stressed that what is involved above all, is the rapid introduction of known and proven methods into practice. He asked scientists and the ministry of agriculture to provide proper assistance to inventors in their search for new solutions. example worth imitating, the speaker mentioned the initiative of innovators to utilize waste heat at the Neukirchen dairy installation, in the Karl-Marx-Stadt rural kreis, upon which the NEUE DEUTSCHE BAUERNZEITUNG has reported in its No 16, 1980.

Good Site Selection Saves Diesel Puel

In five working groups, the scientists then discussed in detail energy-saving processes for plant, animal and fodder production, breeding possibilities, and the development of alternative energy sources. For instance, there was a report on a new sowing method with a drilling machine, now being tested, and which promises to achieve a considerable increase in work productivity while reducing specific energy consumption by 30 percent. However, even with the methods commonly used now, it is still possible to achieve considerable savings. For instance, it has been calculated that the Diesel fuel consumption required to ensile corn could be reduced by 10 (truck transport) to 34 (ZT300 tractors) percent if the distance between field and silo could be reduced from 6 to 4 kilometers by carefully selecting site and structure.

Smaller Cost Through Higher Yield

Prof Dr Georg Vogel declared that the introduction of energy consumption standards in plant production—standards which would take into account soil type, condition and depth of cultivation—is unavoidable if a rational use of energy is to be achieved. At present, such standards exist only for half of all farm work operations. Missing standards, the scientist requested, must be established shortly and made available in actual practice. Also, an adequate combination of operations would make fuel savings possible. This, however, should not lead to a cutting down of the operations necessary to increase yields. Because, as is well known, the higher the yield, the smaller the fuel and material costs corresponding to each deciton of cereal unit, and the better the energy utilization.

Scientific investigations have shown that an energy evaluation must also encompass the whole process, since solutions which are favorable in individual processes can result in additional costs in other places.

More Winter-Growing Vegetable Varieties

Scientists expect much from the increased cultivation of vegetable species and varieties which can be brought to maturity over the winter or in early spring in sparingly heated greenhouses or even in open fields. Through hybridication with Soviet varieties, for instance, a greenhouse cucumber with a heat requirement 2°C lower has been developed in the GDR. A new variety of head lettuce grows at an ambient temperature of 4°C, it will even resist to light frosts, and yields an abundant crop in Pebruary. Chicory can be grown as an early vegetable without any heating. Intensive work is carried out to develop new cold-resistant varieties of other winter vegetables.

As in other economic sectors, technical solutions for heat recuperation exist also in agriculture. Several animal production enterprises are considering utilizing the ambient heat from stables or the heat energy obtained during milk-cooling, using adequate units for heating or for the production of hot water. Experience to-date shows that milk-cooling produces, per cow and per day, enough energy to raise to 50°C the tem erature of industrial water. Other installations are experimenting with heat pumps to recover energy from liquid manure, or with collectors to capture solar energy which is then used to air-condition stables or produce hot water (see also NEUE DEUTSCHE BAUERNZEITUNG No 17, pp 4-5). The latter principle can also be used profitably to dry cereals, hay or green matter.

Better Heat Insulation in Stables

In animal production facilities, half of the electric and thermal energy must now be used to air-condition stables. This expense could be considerably reduced through better insulation, for instance by providing resting surfaces warm to the touch, and through the automatic regulation of heating and ventilating units better adapted to the daily cycle and to other conditions.

Scientists point out, however, that the largest energy carrier in animal production is fodder. Therefore, it must be handled carefully so as to ensure that it is exploited as effectively as possible through correct feeding and to achieve a high level of animal production.

Finally, other possibilities were also discussed during this session: production and use of biogas obtained through anaerobic decomposition of organic matter, for instance liquid manure; investigation of the use of wind energy for agricultural work.

Each Process Thoroughly Thought Out

In his conclusion, the president of the Academy of Agricultural Sciences, Prof Dr Erich Ruebensam, stressed that from now on there should be no new production process, no rationalization attempt, and no other project in which the energy aspect had not been thoroughly thought out.

At the suggestion of the president, the plenum determined to cooperate in preparing a complex program to reduce specific energy consumption and to utilize nonconventional forms of energy in agriculture; this program will serve to assist in orienting the practice, the national direction and science in fulfilling these tasks.

9294 CSO: 2300

DEPARTMENT HEAD QUERIED ON CONSUMER GOODS IMPORT

Budapest ESTI HIRLAP in Hungarian 21 May 80 p 3

[Interview by Eva Nyaradi, with Attila Kiraly, department head in the Ministry of Internal Trade: "Imported Products in the Stores"]

[Text] [Question] What kind of consumer items are we importing this year?

[Answer] Our order list from the USSR and the CEMA countries is longer than ever before. The most important items this year are 60,000 mopeds, and 6 million rubles' worth of knitware, underwear, linens, socks, hoses, carpets, and drapes. We are buying eating utensils for 1.5 million rubles.

We will also buy 8,000 ranges, enameled pots (valued at more than a half million rubles), 21,000 automatic washing machines and 39,000 traditional washing machines, 20,000 black and white television sets, 30,000 tape recorders, 75,000 record players, and 240,000 portable radios. We also ordered glassware, china, photo-optical products, toys, baby carriages, and furniture. We also expect a large volume of building materials and, to expand choices, various sweetmeats, cleaning products, and cosmetics.

Supply and Demand

[Question] For quite a while we have not been able to find in the stores vacuum cleaners, inexpensive men's underwear, and record players in combination with speakers and amplifiers in the stores, to mention but a few of the missing goods. Why is there a shortage?

[Answer] We do not receive the products at a steady rate. There are some, such as the vacuum cleaners, that have not been shipped by our partners since last year. We have promises that they will catch up this year and send them.

[Question] What will be the non-ruble imports?

(Answer) This year, we can buy 3-4 percent more for a dollar than last year. We have to arrange to expand the choice primarily of important

consumer goods, such as citrus fruits, in particular. Our import plan calls for 36,000 tons of lemons and 30,000 tons of oranges. This year the world market price of bananas is very high. Therefore we can import only a small quantity this spring; only 10-15,000 tons. At this time of year tropical fruit prices are high on the world market and we have to wait for the right time to buy. The situation is made more difficult by cold weather here which is delaying our fresh fruits.

Respectable Quantities

We buy a lot of coffee from the capitalist markets: 37,500 tons. We also buy \$6 million worth of spices.

We buy baby food and diabetics preparations and other, vitally important products for the sick, for \$1 million each. We continue importing household and consumer chemical products. We spend almost \$5 million on cleaning products, \$1.2 million on cosmetics, \$31 million on clothing (underwear and linens, knitware, fashion items, jeans), \$3 million on rust-proof tableware and portable radios, and \$2 million for radio-tape recorder combinations. We also have to buy batteries, furniture (\$4 million), photography items (also \$4 million), sporting goods, toys, and musical instruments (\$4 million). In addition, we also import mass consumer items from the developing countries.

[Question] Listed this way, these quantities appear to be a lot... Yet, . it does not appear to be a lot in the stores. Why is that?

[Answer] There may be several reasons. The first one, perhaps, is that the shoppers have seen certain goods, such as tooth paste, soap, cleaning products, and other chemical products for many years and even decades now. They have got used to them and do not pay much attention to them. They start paying attention suddenly when—as steady buyers of the product—they cannot find them on the shelves, perhaps because the shipments are late. Last year the population spent 57 billion forints on consumer products. And as long as we are talking of statistics, I should mention that our latest assessments show that our population spends every fifth forint on imports.

Fewer Luxury Products

Our goal is to continue supplying the people in a balanced way. But it is a fact that it is hard to keep up the level. In recent years, many products stopped being made here. These have to be replaced by imports. This is why we would rather spend our money on the important mass consumer items and—as I think the majority of our consumers will agree—less on luxury items such as perfume, cocktails and cigarettes.

10,101 CSO: 2500

ROMANY APPRAISES PROSPECTS OF AGRICULTURE

Budapest TARSADALMI SZEMLE in Hungarian No 5, May 80 pp 20-28

[Article by Pal Romany, minister of agriculture and food industry: "New Questions Facing Hungarian Agriculture"]

[Text] We are in the last year of the Fifth Five-Year Plan. The Sixth Five-Year Plan has been under preparation for about 2 years. The most frequently occurring question during the planning (whether verbalized or not) was: What are the earlier concepts in agriculture that we can preserve and what are those which we must view differently because of changed circumstances.

The national economic plan will again set the same goal: to satisfy consumer demands at an increasingly higher level and to increase and make more economical the export of sampluses. It is obvious, however, that within the plan certain parts will receive different emphasis than heretofore. The growth of dome-tic consumption is expected to be slower than in the past. Here the goals for the individual product surpluses have not been finalized but we can expect that by 1985 consumption will grow moderately compared to this year. Naturally the choice of foods and domestic sales of the new types of goods will expand in the next decade, and the significance of other requirements will also increase. Besides expanding exports, we must prepare in international trade for difficult price battles, rivalries in quality, or in a word: competition.

At the same time we must soberly see that our goals and the means for reaching them do not in all respects correspond, or at least not at the start. At least they do so to a lesser extent than in the present five-year plan. Therfore the improvements will require greater, more complex, better-thought-out performance of our tasks than before, resilient and consistent uncovering of resources, more agile conformance, more efficient work from all of us. We must achieve better economic operation with fewer resources, and these resources will not be as easily seen as they were years ago. Are there any, at all? I am convinced that there are, and also that we will find the way to them.

1. It is a knowle fact that our country's natural geographic conditions are relatively favorable. More than 70 percent of the country's land area is no-called agricultural area (that is, plowlands, gardens, meadows, pastures), which is the highest ratio in Europe. Partly in connection with this, in our country the population per 100 hectares of agricultural area is relatively low (151 people), though far from being the lowest on our continent. Yet it can be justly said that compared to the size of the population we have plenty of agricultural land. This condition must be made to pay dividends and be protected even better than in the past.

For example, relative climate productivity* in about 32 percent higher than in Poland and 10 percent higher than in Rumania. At the name time, it is about 5 percent lower than in Bulgaria, which is on the sea. It is also known that vasically our climate is not too stable, and 3 poor agricultural years can always be expected in a decade. The blows of years with unfavorable weather can be decreased by adequate producing technologies and by improvements, but setting higher yield averages for goals may in itself also increase the risks.

Therefore, we must strive to raise the standards of plant cultivation's technological background to a level which can reliably decrease the losses caused by a work phase done under difficult climate circumstances (rainy barvest, early autumn jobs). Today our country is in one of the last place, among the European CEMA countries with respect to total agricultural tractive capacity (tractors, trucks and combines) per 100 hectares of placelands, betticultural area, vineyeards and fruit orchards, and the energy supply level is also low. (Thus the misinformations floating around from time to time about Hungarian agriculture being overmechanized do not hold water even in the light of the statistics.)

The producing land itself is the main source of our resources. By consistently observing the existing land-protection laws it can be achieved, and by taking a determined stand it must be achieved, that in the next is years the cultivated area decrease "only" by about 90,000 hectares. This is only 40 percent of the last 5 years' decrease. By itself even this is too much, especially if we consider that more than half of our producing area is area which has been harmed in some way even so. A triple task derives from this. Lands with better than average quality and with better declogical characteristics must be given special protection; areas which can be improved must be made more suitable for producing by using improved techniques; in addition to the improvement work, greater professionalism must be achieved in protecting soil productivity on our lands with average producing abilities. Actually, neglecting the replenishment of organic materials is the foundation of the chemical warfare conducted against the soil.

[&]quot;Several years' average of the climate's quantitative effect on the product volume of single-season plants produced per unit area of plowland.

We can see it on a number of ecologically heavily loaded producing areas that economic management of soil potential and of water supplies are interrelated, complex tasks. On the greatest majority of agriculturally cultivatable areas, water is already a limiting factor, even with today's vield averages. But with complex hydroimprovement and hydrotechnical work enabling better storage of the moisture which gets into the ground, it rould be achieved that 15 to 20 years from now an approximately 50 percent larger grain crop should not carry that such greater risk. But because of the huge cost, this is more a question of economy than of ecology. However, at any rate we must consider the low percent of irrigability of our present grain plantings to be too little.

Promoting the creation of districts and regionalizing production may help expand our remerves. By present calculations, if the potential, the soil, light, and heat conditions, the climate conditions of the growing areas were taken advantage of by cultures which are precisely suitable for them, by this alone nationwide we could achieve a total agricultural production increase of about 20 percent. However, there is much planning and regulation to be done to reach that point. At times it is not at all easy to create harmony between local and national interests. And it is also not easy to coordinate the processing and storage capacities which have already been built.

It is not related strictly to the question of producing areas, but development of a livestock structure which better conforms to the country's given conditions is also a serious structural matter. Obviously this also has an effect on developing a desirable planting structure and on the import of fodder-enriching feedstocks. At the same time, we have 700,000 hectares of meadows and pastures which we cannot make suitable for large scale production because the operations do not have the financial means necessary to make improvements, to rejuventate them. Just as they do not have the means to enable us to produce cheaper and in better quality, with modern harvesting machines than we do today, the bulk fodder needs of our cattle and sheep stock.

2. It is a known fact that large differences have developed in the production and income indexes of large agricultural operations, in the level of our economic management. There is a significant spread in the specific yield cost and income indexes of the individual production branches and products among the economic operations, and in many cases even within the same enterprise. Even though the differences seen in production levels are explained by the differences which exist in the ecological conditions of production and by the varying financial and technical conditions, these do not always sufficiently justify them. The quality of management and of the enterprise's production organization and also other factors have very significant effect on the differences in production and income among enterprises.

Considering the large spread seen in economic operation and production levels, it is no conserve to pose this question. From the viewpoint of future growth, does it represent reserves or limitations that certain groups of the agricultural enterprises and cooperatives conduct their economic operations at production levels which increasingly differ from each other? To what extent is the difference a driving force and when does it become a force that retards? And, to continue: must we seek the apportunity to increase production and improve efficiency primarily in the ones with lower production levels catching up to the better ones, or in the further vigorous development of the ones which operate at higher production levels? Even though our agricultural policy theses do provide the necessary guidance, there is no unified production policy concept; none has been developed concerning specific answers to these questions. Two contradictory opinions prevail.

According to one of the views, the producer cooperatives and state farms which operate well and with good results will also in the future be the main bearers of production and efficiency. According to the other viewpoint, the main reserves of growth and efficiency improvements are represented by increasing the production levels of the weaker economic operations, by the less favorable specific indexes approaching their neighbors, saying that it is less costly to catch up "from below" than it is to take continued steps from an already higher level. Now when the new plans are being prepared and when the costs are high, these are urgent questions.

The agricultural enterprises which are operating well and successfully at higher production levels, are growing faster and more efficiently. On the one hand, not only the production levels which have developed at the enterprises but based on this very thing also their future growths are determined by the economic strength concentrated in the enterprise, the carlier accumulated production tools, the manpower supply and, last but not least, by their natural circumstances. It provides food for thought that for example, 20 percent of the TSZs (producer cooperatives) (about 300 (arms) have 70 percent of the development funds which can be formed from the 1979 profits of the cooperatives. On the other hand: the efficiency and profitability indexes are also more favorable in the agricultural enterprises which operate at higher production levels. Development concentrated in agricultural enterprises which are operating more efficiently and which have good natural conditions does to a certain extent promote improving efficiency in the utilization of the national economy's resources. And finally, some of the agricultural enterprises with favorable natural conditions cannot take advantage of their opportunities due to their shortness of supply of material factors or because of low profitabilities in some production branches. Therefore exploiting their existing natural and economic conditions in accordance with the national economy's needs calls for central measures in addition to the efforts made by the enterprise. It will be recovered safely and relatively very fast.

The agricultural enterprises with low production and profitability levels grow at moderate rates but they also have exploitable reserves. On the one hand, the unique natural conditions, lower profitability and lower level of equipment supply insure more moderate economic growth. On the other hand, the differences in the level of organization can be evened out and, by means of more effective organizing power, the results of production, its specific indexes can be improved upon. In the future, the greater organizing strength and enterprising ability in the agricultural enterprises (cooperatives) with low economic operating levels will have to serve to modify the production structures, adjusting the producing processes and methods to local conditions. The operation's organization and organizing will have to see to it more vigorously that the requirements of harmony with the given conditions prevail. Often the production structures of poorly operating agricultural enterprises with so-called unfavorable natural conditions are similar to or identical with those with good conditions, thus as far as structure is concerned they are not conforming sufficiently to their conditions. The situation is similar also with regard to the application of producing procedures and methods. The development and spreading of differentiated solutions to producing processes and methods was and is being slowed down to a significant extent by the right supply of production equipment. Thus there is a need for greater selection, a broader scale of methods and equipment systems.

The successful development strategy can be if we do not strive at any cost to equalize specific yields and for this purpose attempt to standardize producing processes, but if we do the opposite, then the yield levels to be achieved must be set in accordance with the differentiated natural and operational conditions and the producing technology must be developed in accord with these. Lately the producing systems have done much to prove that there are no two wheat-producing operations which are alike, identical even in their details.

By introducing modern methods of organizing operations, work and production, the sources of loss can be decreased without significant investments in agricultural enterprises which operate at low production levels and with low profitability. Perfecting the enterprise's internal mechanism, developing its systems and elements in a modern way to conform to the enterprise's given circumstances insures similar opportunities. Due to the fact that conditions and opportunities differ, most tasks appear differently at the various agricultural enterprises. However, from the viewpoint of all agricultural enterprises, it is important to emphasize the importance of modernizing the enterprise's internal mechanism. Further development of the enterprise's directing and management systems in accord with the enterprise's needs, increasing the management chain's efficiency, increasing the independence of and financial rewards to the individual units within the enterprise, application of wage-paying formats which provide better incentives, and creating closer ties between performance, the end product and wages alike can be significant factors of growth, of the way efficiencies develop.

The regulations which define the economic environment place strict requirements on all agricultural enterprises. These can be complied with only with detailed analysis of the system of internal conditions and by insuring harmony between the demands and the natural endowments. It is important that the increased requirements and greater responsibilities should be seen not only by the enterprise's management circles but that the collectives of the various operations, facilities, branches, brigades should also see it. Indeed, they should see it as it relates to their own specific production assignments, together with the consequences, results and local regulations which affect their personal financial interests.

It can be expected that making the economic regulators more severe will have a more severe effect on the agricultural enterprises which have unfavorable natural endowments and which have operated uneconomically for a longer time, in spite of the additionally provided state subsidies and benefits. In agriculture, the enterprises which in the coming years will not grow but will stagnate, and in some cases will even cut back—in a planned manner—will come from among these. These will be the agricultural enterprises whose growth in given cases will have to solved not in the intensive but in the extensive direction, where, instead of the use of industrial—type technology, preference will have to be given to the use of traditional production processes, methods, organizing and wage—paying formats—but this will have to be done well! Frill—free, simple solutions!

Preparations will have to be made for this not only economically but also politically. And while methods of solution are being sought, it will have to be kept in mind that the changes are occurring by means of measures taken intentionally, for the purpose of increasing efficiency, to provide stronger incentives for mobilizing the enterprise's reserves. There are very few agricultural enterprises with natural conditions so unfavorable which, by means of making use of the reserves and opportunities mentioned above—even under more strict conditions—could not stabilize its economic operation as early as in the next few years at the level of a one—time comeback, creating thereby the basic conditions for later, expanded re—covery. There are and there will be cases when complex economic solutions beyond agriculture will be needed, since modification of the infrastructure or the upswing of one industrial branch or of another can cause basic changes in the environment of agricultural enterprises as well as within agriculture itself.

One thing is certain: The era of great zeal, meditations, then of complete turnabouts is past in agriculture also. Continuous progress is needed, consistency implemented step by step.

3. According to the latest available data, a process which has been going on for three decades, that is, the decrease of the number and ratio of agricultural manpower, has stopped. The number of active wage earners did not decrease in agriculture, on the contrary it increased by a modest but statistically perceivable number (by 2,000 people). Naturally this is

not a significant increase, but at least it is not a decrease. We have every reason to assume that the agricultural population will not fall significantly below today's level. At this time there are 6.8 hectares of agricultural area per agricultural wage earner. The number of people actually employed in the process of biological transformation is significantly lower than this, and there the decline of employment probably has not stopped yet.

I would not mention this quantitative resource if it were not for three known facts:

- 1. The peasant generation which heroically, practically with its bare hands, accomplished the socialist transformation of agriculture has been replaced by a better trained young generation which we have trained already in the schools, then later during the course of job training to love the new, and not that they should honor the job's traditions. Thus what is involved here is not a simple turnover but an expanded regeneration of applied knowledge. And also, simultaneously, that today's "peasant" occupation is no longer a consequence of inheritance but rather of choice.
- 2. The location of industry into the provinces is beginning to produce more and more noticeably that secondary effect pointing beyond the original production goals, which it exerts on the technical culture of the provinces, namely, that in the community the agricultural experts can and do have technical peers in other job areas. The socioecomonic and cultural growth of today's village at the same time increases its strength to hang on to this. This and its consequences must also be noticed! The fact that there no longer is a significant difference in income between people in agriculture and those working other branches of the national economy also exerts its effect in this direction.
- 3. Nonagricultural workers also produce agricultural products. Twenty-five percent of the meat consumed, 45 percent of the vegetable and fruit consumption never sees commerce and is not transported elsewhere, only from the place it is produced to the kitchen. These advantages are obvious, these are efforts recognized and appreciated all over the world.

The natural geographic and agricultural ecological conditions, the enterprise's natural endowments, the production factors exert their effects together; they not only complement each other but also are the precondittions for each other. However, with how much knowledge, with what kind of information and ability man applies the agricultural as well as the industrial factors, how he fits these to the other conditions, will determine their effect and harmony. Reaching the goals, correctly identifying the tasks and, in the final analysis, the efficiency of production depends on this. And it is also very important: neither production's natural endowments nor human preparedness can be objects of commercial trade. However, we can practice good stewardship with respect to both if our industrial and agricultural means conform satisfactorily to them.

This is why it is so tremendously important that our economic cadres stand their ground well. The significance of the effect which today our 27,500 university-trained and 19,000 college-trained professionals (56 percent of them are under 35 years of age) exert-together with the hundreds of thousands of people in agriculture—in the qualitative sense of the economic, political and sociological growth of the Hungarian village, cannot be sufficiently emphasized. We plan to provide advanced training to 354,000 physical workers in the Sixth Pive-Year Plan. This means nothing less than that we will put one of every three of our workers behind a schooldesk. It will not be an inexpensive process but it will be worth it because it is not possible to operate an intensively growing, modern agriculture without quality engineering work at each and every post of production.

However, we cannot pass by without comment on a few experiences and problems which we have observed recently in agriculture's direct management.

-The increasing size of operations can decrease the contact between the technological process and enterprise management. In the past this was quite direct. There are extreme examples of managers and TSZ presidents who have moved to live in the megye seats and who commute from there. Of course these are not typical. Yet I can with approval quote the words of one of our national award-vinning vice presidents who once said: The custom in our operation is that when corn is being planted, every agricultural engineer and technician—regardless of his job assignment—must work on the seeding machines: To wit, what was unsuccessful when sowing cannot be corrected for a year with any kind of makeups or additional expenses. This example can be applied to every branch and phase of food production: all technological processes are such here that if one has to intervene somewhere, he cannot wait for tomorrow, it cannot be postponed, the biological process cannot be stopped.

--Understandably the roles of planning, development and organizing work requiring greater resources, and of counseling have increased. But this work cannot take on the character of "remote control," it cannot be performed on day trips from central headquarters. The "concentration" of strength must not lead to the removal of experts from production. We must see to it—this is our determined intention—that interests should prevail at even greater than the present level, and that those who do direct productive work should be surrounded by greater appreciation regardless of their assignemnt. Whether or not we will be able to rally uncover our human resources will be decided on the front of direct production.

4. We feel that we have other significant reserves in technology where practically every stage of the production and processing chain holds some promise. We also expect that what results have already achieved in the laboratories, and what is already in 0-serial production in the factories, we can build on in the next medium-range-plan time period. Later we will be able to take into consideration science's new results, and also what is still unknown. The storehouse of the world's knowledge is huge even so. Each year hundreds of new domestic and foreign types and methods are being tested.

Cultivation of early ripening hybrids and types with shorter growing seasons will have great significance. By this means not only the risk of an early autumn can be decreased but by better conforming to the weather less nutrients and most importantly less drying energy will have to be used than now. If the moisture content of the harvested grains were only 1 percent lower, nationally we could save 12,000 to 15,000 tons of heating oil. Development of types with better grain-to-straw ratio and ones with better ability to give off water at the time of ripening are important research tanks.

In our soil work for plant growing, significant amounts of energy can be saved by the technology called "energy-saving soil work," by creating harmony between the power plants and the working machinery. In the next decade we would also like to expect that the manufacturing of agricultural machinery will be socialist international cooperation find a way to produce such effective and energy-efficient harvesting machines, such as for example, the axial combine.

it is known in professional circles that one of the main reasons for agriculture's high energy consumption is the practically exclusive practice of corn harvesting which involves shelling. This is understandable, for example, in U.S. agriculture which produces only corn for sale; but in a country where most of the corn produced is fed to the animals where it is produced or not far from there, looking at it with today's eyes this is just as hard to understand as is the building of windowless department stores simply as an architectural habit.

I wish to emphasize the expression "with today's eyes." The fact is that in the era of cheap energy many things looked different. Practical experts will back me up on how difficult it is to extricate ourselves in the given time period from following a technology which at one time was considered to be exclusively the lasting one. Unfortunately the conservative effect of the profession's public opinion and—as in the present case—the machinery supply, which does not even import other types of machiner, see to this. Therefore the people who take initiatives deserve credit. For example the leadership and the workers of the Csavoly [a town] TSZ who almost two decades ago initiated the method preserving corn without drying. The country known it now as the "Csavoly system."

Of course, grain intended for export and for producing blended feeds will continue to have to be dried in the future. If the modern dyring instruments which prevent overdrying spread nationwide, it will hardly be necessary to use 40 kgs of heating oil to dry 1 ton of corn. It is also not a conspicuous but nevertheless significant energy item which is used in this country each year to granulate the 6.8 million tons of blended feed. Granulating with themuch less energy-demanding additive materials is already being used in foreign practice and will hopefully be used soon also in this country.

It seems that, with the energy-saving methods which are being received with wide interest, the new process which is usually called the "chemicalization of livestock raising," is receiving less attention than it would deserve. With it, the chemicalization of agriculture will become complete. Practically unnoticed, several hundred types of products of the chemical and biological industries have entered the everyday practice of livestock raising in a very short time in comparison with the spreading of plant-protecting chemicals and chemical fertilizers. In addition to the numerous chemicals to cut down on livestock deaths, increase yields and preserve feeds, significant reserves to the efficiency of livestock raising are concealed in the additives which improve the contents, nutritive value and digestability of feeds. The ripening breakthrough of genetic standards will be made tangible reality by, among other things, these chemicals. We see one of the important components of the competitiveness of Hungarian livestock raising, and at the same time its reserves, in starting up the domestic production of the most important fermentation materials, such as for example, monensin. We see it also in spreading the idea in this country, that the chemical industry, especially the pharmaceutical industry, should seek domestic and doreign markets in agriculture of at least of the same order of magnitude as in human consumption.

It is also justified that whenever possible th processing industries should put their byproducts in such form that these should be able to be used in agriculture. At the Gyor Alcohol Industry Enterprise, for example, every year alcohol process wastes equivalent to 25,000 tons of grain fodder were wasted and polluted the environment, due to developments being behind schedule and later delays caused by red tape in obtaining import permits.

It is a fact that these investments as well as a number of energy-rationalization measures are not yet now able to prove that return index which would be necessary to be able to glide through the curves of the permit-obtaining process easily, by themselves. However, actually there are not alternatives to them. Without modern feeding and modern feeds there is no competitive Hungarian livestock raising! By the way, the level of a country's entire agriculture is easiest to judge by the condition of its livestock raising, and from its trends conclusions can be made about deeply rooted economic processes.

The competitiveness of our exports also depend on our investments and on how our trends develop. Even though in the seventies agricultural exports achieved a fourfold increase, the commercial profit falls short of this dynamism-due in part to our technology. There are big tasks here for the entire branch.

In its resolutions, the 12th MSZMP congress has set goals for Hungarian agriculture, food industry and forestry management which are larger than today's goals but are achievable. In order to implement them, it is indispensable to realistically inventory our resources and compare them

with our opportunities, to consciously set our ranks in order. In order for our intentions to become realities, the most important thing for us to do today is to create the appropriate economic-political environment in order to quickly adapt to conditions. I am convinced that in this manner the agricultural branch will be able to win the difficult battles of the eighties; that it will be able to achieve the performance the country expects from it in the interest of reestablishing the equilibrium of the national economy and of foreign trade; that we will be able to keep that level of the food supply which is a valuable, inseparable part of our standard of living, a true result of the MSZMP's policy for agriculture and for the cooperatives.

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CSO: 2500

AGRICULTURAL COOPERATIVES MEET CHALLENGES RESOURCEFULLY

Budapest MAGYAR HIRLAP in Hungarian 25 May 80 p 5

[Interview with Mihaly Lehoczki, deputy secretary-general of the National Council of Producer Cooperatives [NCPC], by correspondent Nandor Keresztenyi. Place and date not given.]

[Text] Mihaly Lehoczki was born in 1934 in Totkomlos. He studied agronomics in Odessa and graduated in 1957. He began to work at the Mezohegyes State Farm and was chief agronomist at the Red Star Cooperative of Fuzesgyarmat between 1960 and 1976. At the third congress of producer cooperatives, which was held in late 1976, he was elected deputy secretary-general of the NPC where he is now dealing with the topics of economic regulation, marketing and production development. Since 1973, he has been one of the vice-presidents of the National Peace Council.

This May's economic problems are not at all new, during the past decade we have become familiar with the complaints: delayed work on the fields, frost in the southern regions, sand storms, re-sowed corn on other fields. We also hear, on the other hand, of nice winter wheat, hopefully blooming apple trees and, perhaps most important, of stores and markets loaded with food. Our correspondent, Nandor Keresztenyi, talked about the farming situation with Mihaly Lehoczki, deputy secretary-general of the NCPC.

[Question] What is happening now in the fields?

[Answer] I went to Fuzesgyarmat a few days ago, I saw the fields and talked with my colleagues there. On the whole, I found the same situation as that reported from other regions of the country, namely, the sowing of corn which is an important fodder crop has been delayed. Partly because of the cold weather, it does not seem to grow evenly. It was a real experience to see the experiment, which I have heard of before, in which a mineral, zeolite from the Tokaj-hegyalja mines, is mixed with the fodder at the cooperative and thus the chickens utilize protein better. Through this process, the fodder's nutrients are better used and it is understandable that visitors come from other cooperatives. The cooperative of Mezokovesd also began to experiment with this method. But staying with Fuzesgyarmat, let me mention

another exemplary initiative which will conserve energy. They switched from heating oil to crude oil (it is commonly called mazout), resulting in 30 percent less energy costs. The cooperative and the Institute of Energy Economy have recently initiated a joint venture in which they are trying to use great volumes of by-products such as corn-stalk and hay as energy sources.

(Question) What will be the effect of this difficult spring on farming?

[Answer] I already mentioned the weather. The tasks of the cooperatives' membership and leaders will be made even more complex by everything that results from this year's changes in the economic regulations. The cooperatives accept all of this as reality and are looking for ways of increasing incomes and defining enterprise management. This is, of course, a longer-range process. Returning to the weather, everyone would like to see plenty of sunshine, for both vegetables and fruits, and sugar beets, are craving for warmth.

[Question] Are the problems in livestock farming less apparent?

[Answer] It is well known that the development of our livestock was impressive on the whole. This is especially true of hogs. About half of the hogs will continue to come from the household plots for a good while yet, although there were some unfavorable phenomena regarding the household plots. There is less willingness for signing contracts and thus it is a good thing that economic authorities have made some corrections recently, taking measures in improving fodder marketing and in decreasing the price of paper bags. They also changed the weight ceilings for porkers, according to the farmers' request. Since the seizmograph in question is very sensitive, the attention must also be close, if only for the fact that the decreasing number of sows is a sign of warning, the consequences of which may be felt next year, although not this year...

[Question] In the past 2 weeks, you have taken part in two national conferences. The NCPC invited industrial representatives to one of these and there were pretty hot arguments between the farm machine manufacturing enterprises and the consumers, that is, representatives of the cooperatives. At the other meeting, which was the NCPC's first one this year, you read the document on the general use of the funds for mutual support.

[Answer] Well, as far as the supply of farm machines is concerned, the development is well known which characterized the cooperative? household during the 20 years of our existence. Our main crops, such a wheat and corn, have been mechanized from sowing to harvest; well, we could, in close connection with this, talk about the proliferation of the various chemicals. We could mention, for example, that the cooperatives are putting 10 times more artifical fertilizer into the soil now (figured in active ingredients) than they did in the years of reorganization. This corresponds to 330 kilos per hectare. The problems still being brought up are

primarily complaints about quality. The situation is similar in machine supply as well. The selection of power machines is narrow and sometimes machines not suitable for the task must be used, and this results in additional costs. Tractors of 20 to 30 horsepowers are missing from the gardens, for example, and we cannot actually say that there is a sufficient number of power machines for the optimal performance of the various operations. We can witness the debates on better-organized machine repairs that take place both in the NCPC and in the forums the megye business federation, that is, in the cooperatives' associations that were established in 1967 and in other places. This is connected with the fact that the cooperatives have relatively few repair shops and that there are still shortages of spare parts for imported machines, although the supply of spare parts for domestic machines has much improved. The demand has been brought up for a more efficient mechanization of loading and shipping and for the development of more energy-efficient technological processes.

[Question] I have been in Csavoly where the cooperative introduced a method of drying corn without the use of oil...

[Answer] The "savoly cooperatives's method is becoming more and more well-known and used, and to aid this, the NCPC organized many trips to Csavoly, notes Mihaly Lehoczki. The solution is actually very simple: the grains are stored in pits lined, and hermetically sealed, with foil. The energy used earlier for drying corn, for example, can be saved this way. It would be difficult at the moment to figure out the general possibilities in reviving traditional systems and in their coupling with methods that are said to be the most up-to-date.

[Question] I feel that the NCPC's recent decision to nationally establish mutual support funds, a concept already wide-spread in the megyes, is extremely important. Could we hear some details of this subject-matter?

[Answer] The NCPC's presidium discussed on 27 February the establishment of the National Mutual Support Fund, says the deputy secretary-general. The presidium has made the decision that the pertinent bills be submitted to the Hungarian National Bank and the Ministry of Finances and then, taking advantage of the possiblity given by the economic regulations, we will request the government to make a decree. Well, this is what happened at the meeting of the national council. What is this all about? The support funds, commonly called MSF, amounted to 650 million forints at the beginning of this year, and this a 75 percent increase when compared with the 371 million forints of last year. The outlaid loans amount to 615 million forints, that is, experiences at the megyes show that they used the MSF flexibly and according t their needs and thus avoided, by speeding up money circulation, to have more cash in hand at year's end than justified. With the realization of this ancient principle of cooperative (indeed, the weavers of the Manchester area, who were first in establishing cooperatives, had also proclaimed this principle!), the cooperatives can have an even larger role in re-establishing the financial balance that has been unstable here and there. The possibility is primarily for supplementary loans which make it possible for the cooperatives to use the already approved state loans, one of the usual conditions of which being a so-called "one's own source." The MSF loan is not enough for larger economic projects such as the building of livestock ranges, for example, for its amount is, on the average, I million forints.

[Question] Do the cooperatives understand the significance of mutual help?

[Answer] I think your question is somewhat poetic, but there are undoubtedly some who are reluctant. There are two groups of cooperatives that forego the MSF. One is that of economically very stable cooperatives, and the other is that of the smallest ones which use up their surplus funds every year. The latter think that the MSF cannot give them significant help and their membership is only formal. However, we have seen in Baranya and other places that even weak cooperatives, which contributed very little or none, received significant financial assistance to cope with their temporary financial problems. It also happened that the members of a cooperative offered their own savings—as in the Ferenc Erdei cooperative of Harta—for buying machines and for other purposes. I hope that the National Mutual Support Fund, based on a strict voluntary principle, will be soon established. Its operation will be beneficial for our entire cooperative movement.

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CSO: 2500

REGULATOR SUPPORTS FOR AGRICULTURE EXPLAINED

Budapest HETI VILAGGAZDASAG in Hungarian 17 May 80 pp 56-58

[Article: "Supports--According To a Scale"]

[Text] The principle of standardization—that every operating organization be measured on a uniform scale—can be realized in agriculture only through constraints. In this national economic branch—as in other socialist and capitalist countries—there is still a need for a wide-ranging subsidy system in order that the quantity and location of production correspond to the requirements of domestic and foreign consumers.

The new regulation system is simplifying agricultural subsidication while it is reducing the amount of supports and making them more selective. Within the subsidy system, we distinguish development, cost-reduction and operational subsidies.

Farms count on development subsidies primarily for construction and plant introduction investments. These investments, or rather investment proportions, determine the production structure of agriculture. Thus the instruments of state influence are very significant in this area. The form of support in the relatively broad (but narrower than before) sphere of production, and in the most needed infrastructural investments is the so-called basic investment subsidy. In formulating their development plans, large agricultural enterprises can count on receiving this type of subsidy over a longer period.

The amount of subsidy is 20 percent of the implementation cost of the given investment. It is not necessary to establish separate standards to limit implementation costs in addition to these standards, because the 80-percent share which encumbers their resources makes the farms sufficiently interested in reducing implementation costs. For development goals which are especially important from the national economic standpoint, the subsidy can extend to another 20 percent of the implementation costs (thus to a total of 40 percent).

The reduction in development subsides pertains primarily to supports for machinery investments. From 1980, the budget subsidies the acquisition of domestically manufactured and certain imported machinery—under specific conditions—to 15 percent of the imported or domestic production price. Previously, large agricultural enterprises received 60-70 percent subsidy for the acquisition of equipment serving to mechanize special resimplical processes. Subsidy for machinery of this sort has also been reduced, but it still remains higher than that for ordinary machinery.

In cost-reduction subsidies, the supports for artificial fertilizer procurement will continue to be in effect after 1 January 1980. Within this, the rate of support for nitrogenous and phosphorus fertilizers is 37 and 49 percent of domestic production prices respectively. The degree of support for imported fertilizers—in conjunction with the development of import prices—is determined by the minister of finance, with the concurrence of the minister of agriculture and food industry and the chairman of the National Material and Price Office. In addition to the 25-percent increase in agricultural transfer prices, the average subsidy for plant protection and weed-killing substances is reduced from 47 to 22 percent.

The so-called operational subsidies in trge agricultural enterprises serve primarily to reimburse losses resulting from large investments and low sales prices, and thus to create the conditions of development. The most significant of this type of subsidy is that for cattle raising. The amount of milk-price supplements has increased from the earlier 1.40 to 1.80 forints per liter. Subsidy for keeping cows in household and supplementary forms serves the same purpose as milk-price supplementation. These forms will continue to receive subsidies of 2,500 forints for the first cow, and 5,000 forints each for additional cows kept.

From among the previously available subsidies, the so-called pork-sales premiums, I forints per kilogram of live weight, which large agricultural enterprises received for fattened hogs produced in hogkeeping structures ante dating 1 January 1968 have been eliminated. The maintenance of this form of support was no longer justified because the older hogkeeping structures whose modernization was reasonable have since been renovated through state subsidies. Continuing to keep those which cannot be modernized requires such an excess of feed consumption that special incentives for them are undesirable.

Subsidies for large agricultural enterprises with unfavorable natural resources belong among the specialized kinds of supports. Since state agricultural purchase prices are continuing to take into account the expenditure levels of large enterprises farming in soil somewhat worse

than average, the results achieved with the same labor in the worse but still cultivable soil-without subsidy-are considerably less than average, and can occasionally bring no profit at all. Thus it is sensible to reimburse those farming in such soil for a portion of their expenditures.

In addition to the so-called base-price supplementation available to all farms with unfavorable resources, these farms can also receive special price supplementation in order to better exploit their peculiar local production resources. When this was established, the fundamental viewpoint was that in certain regions farms should increase the proportion of those products in their production structure which could be grown there with relatively good results. Seven characteristic growing regions were identified in this manner: the southern, the western and northern Dunantul hilly region, the sandy regions between the Danube and Tisza Rivers and Szabolcsszatmar, the mountain regions of northern Hungary and Hegyalja.

Beginning with 1980, the standardization of agricultural tax policy will be implemented by making the development of funds in agriculture more uniform. Agricultural enterprises are utilizing their gross incomes in a specified sequence. The sequence and title of utilization is as follows:

- mewages;
- --settlement of the previous year's losses;
- -- supplementation of the funds utilized for loss payments;
- -- taxes (within this: city and community contributions, income taxes, wage taxes, contingency taxes);
- -- funds (within this: reserve fund, development fund, contingency fund, social and cultural funds, emergency fund).

Large agricultural enterprises are to develop reserve funds, whose annual amount is 10 percent of the profit minus taxes, under a uniform system. The development is mandatory until the fund reaches 25 percent of the combined total of the particular year's total wages and profits. Production cooperatives which are members of the mutual support fund are required to build up a reserve fund of only 20 percent of total wages and profits. In general, the reserve fund may be utilized only with the provision of repayment. Under a 5-year repayment obligation, it may be utilized to offset a particular year's losses, to supplement the tax and reserve fund reduced profits, and where justified, to supplement the working capital.

The so-called mutual support fund is brought into existence through the voluntary decision and contributions of cooperatives for their own mutual financial assistance. The money placed into the fund can be utilized for permanent allocations, bank credit security or for loans. The cooperatives pay 35 percent of their annual reserve funds into the mutual support fund. There is no obligation for further supplementation attached to this payment. State farms contribute 20 percent of their annual reserve funds into a centralized reserve which serves a similar role.

The building of the reserve fund differs somewhat in state farms and cooperatives. Production cooperatives must build up enough development funds to eliminate a possible development fund deficit and to make the payment of the obligations which fall due possible. Even beyond this, state farms also must deposit in the development fund those amounts which—in addition to the development of other resources—are necessary for fulfilling the obligations which fall upon the following year's development funds.

Emergency funds can be reated when the development of the reserve, development, contingency and ascial and cultural funds does not encumber the full amount of the taxed profits. This fund must primarily be used for settling losses, for covering deficits in the interest funds and for supplementation of results according to the balance.

9093 CSO: 2500 CLARIFICATION OF AGRICULTURE'S PRICE, TAX SYSTEM ATTEMPTED

Budapest HETI VILAGGAZDASAG in Hungarian No 19, 10 kay 80 p 55

[Article: "Complicated Simplicity"]

[Text] In Hungary, every fifth active wage earner is working either in the agricultural or food industry sector. Each of these workers must provide food for nine people. It follows from this that the regulation of agriculture is an exceptionally important element of the economic mechanism. The changes in the world economy which have taken place are placing new requirements on this branch also. These requirements—acknowledging that in agriculture the proprietorships and production circumstances are unusual—must be transmitted by the regulations.

The world market price increases for raw materials and energy obviously also affect agricultural production. Thus, when the agricultural price system was changed, the leading policy was that the price increases must be partially shifted to agriculture. In practice, this meant that the state supports included in state purchase prices had to be reduced.

Economic direction could not set the total elimination of supports as its goal—that is, agricultural producers could not be expected to absorb the increased costs in their totality—because the difference between the state purchase price and consumer prices would have increased significantly. This, however, would have motivated some of the producers to increase the demand for the strongly supported consumer foodstuffs, instead of for their own expensively grown products. Since agricultural self—consumption is still considerable in Hungary, the transfer of the demand would have presented insurmountable problems for the food supply.

Thus the reduction of state purchase price supports paralleled the price increases. While in 1977 there was 24 forints worth of subsidy in the state purchase price of each 100 forints worth of agricultural products, this year only 18 forints out of 100 are for this purpose. At the same time, the state purchase price level itself increased 11 percent.

With the establishment of agricultural production prices, the reduction of the gratuitous large-scale spread which existed in the profit content of state purchase prices of some activity branches, and which did not follow the proportionate expense differences, also had to be resolved. Therefore, according to the new regulations, the production prices of field crops increased 5 percent, those of vegetable and fruit production by 10-15 percent, and those of animal products by 11 percent.

Because of the peculiar conditions of agriculture, there is a greater spread in enterprise income than in other national economic branches. Thus the agricultural tax system must continue in the future to force large enterprise income differentiation into a sensible framework—in addition to achieving the valid general goals of taxation. The method for doing this is partial withholding of the differential allowance. Farms with more favorable resources will continue to pay more taxes from 1980 than those working under harsher natural conditions, but the degree of taxation does not restrict the potentialities for profitable production development.

The agricultural tax system will continue to be so-called multichannelled, which means that payments must be under various guises—
as opposed to industry, where taxes are deducted only from profits.
The land tax, instead of the previous differentiation based on the
average gold korona value of the large farms, is now determined according
to special progressively increasing tax rate in each cultivation branch
(field cultivation, grape and fruit, grassland-pasture). Compared to
the pre-1980 regulations, the income tax has been simplified.
Previously, production cooperatives paid taxes on their gross incomes,
and state farms on their profits. Now, however, the tax basis is the
gross income uniformly. The tax itself is paid from the profits, but
the limit on tax payments has been reduced. Those agricultural enterprises whose total calculated tax exceeds 70 percent of their profit
are not required to pay the portion over 70 percent.

Within the tax system, the task of the wage regulation tax is to maintain the increase of personal incomes in large enterprises within the framework determined by the plan. A new feature of the regulation is that midyear increases in wages and salaries and the formation of the contingent fund are now regulated by separate tax schedules—the wage and contingency tax schedules. Enterprises may raise the wage levels within the limits of a predetermined scale without being taxed. Exceeding the scale, however, results in the obligation to pay a progressive tax.

Large agricultural enterprises may build a partially tax-free contingency fund from their profits. If the contingency fund exceeds the permitted level, the "excess" is taxed. If the excess reaches the first 1 percent of the total wages, the tax is 100 percent. After the second 1 percent, the tax is 200 percent; for every additional 1 percent, 5 times the exceeding amount must be paid in taxes.

The new regulations of the wage and contingency taxes are intended to prevent the "running away" of income outflow. At the same time, they are to assist the formation of harmony between wages and performance, and are to motivate to more effective utilization of the labor force.

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RAILROAD TRANSPORT SERVICE TASKS IN 1980 DESCRIBED

Warsaw EKSPLOATACJA KOLEI in Polish No 2, Feb 80 pp 37-42

[Article by Ryszard Olejniczak: "The Railroad Transport-Service Tasks Originate in the Transportation Situation of 1980"]

[Text] The starting point for determining transport service tasks in 1980 in the National Socioeconomic Plan (NPSG) were the transportation requirements formulated on the basis of the accepted direction of our country's socioeconomic development and adjusted to the current capabilities and the internal and external conditions. One of these conditions was the state of the transportation system and the results achieved in the previous year. It was not a good year for the transportation system. The exceptionally difficult conditions under which all branches of transportation system had to work at the beginning of 1979 had a significant impact on the transportation capabilities of individual transportation organizations. In effect, all freight transportation branches carried about 50 million tons less than the quantity set by the NPSG for 1979. However, the result of the transportation system situation that prevailed in the first six months of last year was not only a transport-service backlog but also a marked deterioration of transportation fleet's operational readiness.

In fact, the effects of this deterioration, as measured by non-operationally ready capability and in relation to the total transportation capability, were not that large. The essential fact, however, was that these effects, added to the existing shortcomings, caused a decrease of operational readiness of the transportation fleet below a critical point prompting a situation in which the reliability of the system (mostly rolling stock and tracks) was decreasing faster than the restorative capability. This was one of the basic reasons for failing to achieve the planned improvement of transportation services and of the operational situation of transportation system. The additional efforts necessitated by this situation must be superimposed on the 1980 tasks and will require concentrated efforts of all branches of transportation system, and especially of the railroads, in order to solve two basic problems:

-- to increase the capability and productivity of maintenance facilities,

-- to restore the balance of transport services and to return their operations to normal state.

These two requirements are of equal priority in order to achieve this year's transportation targets. Personally, I am of the opinion that these two objectives must be achieved even if it would result in failing to carry in 1980 certain cargo less essential for the national economy.

In addition to these two requirements of internal character, the operation of the transport system must be governed by overall economic objectives set by the NPSG for 1980 which, in the area directly related to transportation system, include: improvement of the neergy situation, progress in implementation of the national food program, growth of residential construction, improvement of the foreign trade balance, elimination of excessive material intensiveness in production and adjustment of the size and composition of investment outlays to the supply and performance capabilities.

It should be noted that implementation of these objectives is not always tied to additional transportation load, and to some extent, it permits anticipation of a slower rate of growth of transportation needs. Generally, it can be assumed that 1980 will be devoted to the stabilization and improvement of quality and efficiency of the national economy. This thrust of the economy permits us to expect that the pressure exerted by many branches of national economy on the transportation system will decrease.

The plan for 1980 includes elements which provide a basis for anticipating that there will be favorable conditions to normalize operations of the transport system.

The necessity to assure improvement in the energy and residential construction situations and in the foreign trade will be tied to an increased demand for certain bulk cargo transport services, such as: coal, construction material and goods for export. In result, the character and structure of transportation requirements will tend to change in the following direction:

--increased reliability and productivity of transport systems for bulk cargo (railroads will be oriented to servicing raw materials and motor transportation system to servicing agriculture and food industry),

- --increased efficiency of international transport service,
- -- increased efficiency of traffic control system.

Despite the fact that these requirements are not really new, their intensity coupled with the stabilization of quantitative demand will require active and effective reaction of the whole transportation system. The ability to adjust to these new requirements will be decisive for both the successful completion of transport service tasks in 1980 and the evaluation of effectiveness of individual transportation management levels.

The fact that the direction of economic development envisaged by the NPSG is tied to the slower rate of growth of quantitative transportation requirements is also proven by the fact that the size of production growth increment is smaller than that in 1978 in relation to 1977. Disregarding 1979 which, because of the after-effects of the winter, was an atypical year, this confirmes that there is a general relaxation of tension of the relationship between the national economy and the transportation system. This is a correct evaluation of the transportation system as a whole but, in individual transportation branches and regions of the country, the situation will differ substantially.

Among other reasons, this is caused by an uneven rate of production growth of individual commodity groups. The growth figures shown in Table 1 clearly favor bulk cargoes and among those the following are on top of the list: hard coal and liquid fuels, construction material, all types of stone, artificial fertilizers and agricultural products (except potatoes).

Table I

Type of cargo	Composition of transportation (in 2)				
Hard coal	3.0				
Brown coal and coke	0.6				
Metallic ores	2.0				
Stone, all types	3.2				
Sand and gravel	5.7				
Crudeo oil and petroleum products	3.6				
Metals and metal products	2.9				
Bricks	1.6				
Cement	2.8				
Artificial fertilizers	2.8				
Other chemical products	1.4				
Grain	0.7				
Potatoes	-0.2				
Beets	2.8				
Other agricultural produce and products	2.8				
Lumber and wood products	1.6				
Balance	6.4				
Transit	0.2				

This shows that even though a certain stabilization of transportation requirements by some branches of the national economy can be counted upon, servicing of the mining and construction industries will continue to constitute very demanding tasks for the transportation system.

The most difficult problem and the most important and difficult task will be to carry coal out from Silesia. It will be necessary to carry from the mines the total of 207.6 million tons of coal, and although at the time when this article is being written the precise division of tasks among individual carriers has not been made (Polish State Railroads, trucks, mine railroads), everything indicates that the total growth of coal production and the reduction of storage dumps by about 1 million tons will burden rail transportation.

Also, the anticipated decrease of the transportation coefficient will influence the transportation situation in 1980 which means that it will be necessary to take intensive measures to limit superflous movements. It should be noted in passing that last year, despite an especially difficult transportation situation, the transportation coefficient increased again (Table 2).

Table 2

Item	1976	1977	1978	1979	1980
Production					
(million tons)	785	842	887	873	917
Cargo transported					
(million tons)*	1,440	1,552	1,596	1,617	1,666
Transportation					
coefficient	1.83	1.84	1.80	1.85	1.82

^{*}Public and subbranch transportation (excluding economic-unit [non-organized] transportation system).

The next important element characterizing the transportation situation in 1980 is the basic changes in the inter-branch distribution of transportation tasks.

The council of Ministers resolution regarding the National Socioeconomic Plan commits all subbranch and public transporation organizations to carrying 1,666 million tons of cargo. At the same timeit is assumed that the shipments of individual transportation branches will be at the level shown in Table 3.

As the comparison of quantities shown in Table 3 indicates, for the first time in many years it is anticipated that the quantitative share of rail transport (measured in tons) will grow and simultaneously the share of subbranch transportation organizations will significantly decline.

The share of shipments carried by the State Motor TRansport will grow to an even greater extent than that of railraods. If these trends continue, they may mean a beginning of a real change from the prevailing organization concept of transportation system in the direction of an increase of the role of public carriers, Polish STate Railroads and State Motor Transport. This should gradually facilitate the organization of cooperation between the railroads and themotor transport. This, however, can happen only if there is a much more detailed coordination of movements and much closer cooperation between the railroads and the State Motor Transport both in the field and at the headquarters level.

Table 3

Galezie transportu (1)	1978		1979		1980	
	przewozy (mln t)	8 struktura (%)	Przewozy (mla t)	3 struktura (%)	4 rzewoty (mln t)	Struktura (%)
Transport kolejowy* (4)	489,4	30,6	480,0	29,7	506,0	30,4
Transport samochodowy publicany (5)	224,4	14,0	229,4	14,2	244,0	14,6
Transport samechodowy branzowy (6)	818,5	51,4	843,6	52,2	847,0	50,8
Zegluga śródlądowa (7)	22,4	1,4	23,2	1,4	26,6	1,6
Transport ruroeiagowy (8)	41,1	2,6	40,7	2,5	42,5	2,6
Ogólem (9)	1596,8	100,0	1616,9	100,0	. 1666,0	100,0

^{*} Koleje normainotorowe i washotorowe. (10)

- 1. Transportation
- 2. Shipments (millions of tons)
- 3. Composition (%)
- 4. Railroads*
- 5. Public motor transport
- 6. Subbranch motor transport
- 7. Inland waterways
- 8. Pipelines
- 9. Total
- 10. *Standard and narrow guage

The increased role of more accessible transportation organizations is also cuased by another fact. Namely, both in the proposed plan and in the approved version, the economic unit (non-organized) transportation system was totally omitted. By itself this means a decrease of its role in the country's transportation system. The detailed backup for the 1980 plan indicates that the quantity of shipments through that system will be, at the most, kept at the level of 1979. Considering that to date that system carried over 40 percent of total freight shipments (excluding sea shipments) this means that there will be a basic change in the direction of transportation policy.

The change in the policy direction is also evidenced by the anticipated rate of growth of shipments in the individual transportation branches, namely: 26 million tons for the standard gauge railroads, 14 million tons for the State Motor Transport, 3 million tons for the subbranch motor transportation and 2 million tons for the inland waterways.

The relatively large growth of shipments for anticipated also for the State Motor Transport should stabilize transportation service in two majorfields of national economy: deliveries to market and agriculture (including food processing). In these two areas, the railroads should boldly demand to assume control at the working level of State Motor Transport operations.

The constant trend towards an increase of shipments via inland water-ways was maintained in the 1980 plan. It is true that in relation to the railroads and the major motor carriers, inland waterways still do not carry that much cargo but the accepted trend to focus this branch efforts on servicing certain selected sectors (coal, aggregates, ores and artificial fertilizers) should genuinely simplify the country's transport situation in 1980.

In view of the overall transportation tasks for 1980, it should be concluded that the main responsibility for coping with the growing transportation needs of the country will fall on the railroads. In relation to 1979, the growth rate of shipments carried by the Polish State Railroads, amounting to almost 12 percent, will be decidedly higher than the growth of production (5 percent) and the rate of growth of all shipments (3 percent).

It is difficult to foresee today how in fact so structured a plan will be implemented and to what extent the trend assumed in the NSPG for 1980 will be continued in the future years. Nevertheless, remembering all the reservations and keeping the matter in a proper perspective, one must expect that it will be necessary to reconsider many of the existing organizzational concepts of the country transportation service, such as construction of all kinds of centralized receiving stations which require a sizeable allocation of motor transport capabilities. Also, the efficacy of closing the narrow gauge lines and small stations must be evaluated from a different point of view. Also, one should reconsider

the organizational criteria of forwarding operations, where the guiding principle should be that deliveries are executed to the degree possible using only one means of transportation.

There should be incisive analysis of the advisability of short distance shipments currently performed by the railroads.

Regardless of how one views the situation, it is beyond doubt that the accepted allocation of tasks will not make the life of railroads easy. The allocation, however, is no doubt realistic and justified from the point of view of general economic strategy. One of the conditions of the feasibility of that allocation is the right attitude of customers to the transportation problem. Especially, in the situation described above, it is becoming a necessity to assure a more realistic mutual relationship. There is still too much chaos induced by demanding excessive insurance coverage that forces railroads to accept unrealistic transportation obligations.

The next important matter is to guarantee, wherever it is justified by the type of shipments, maximum compatibility with motor transport by modifying access roads, loading ramps, internal transportation and the storehouses' operating hours. This should eliminate the still frequent instances of occasionally kilometer-long truck lines waiting for loading or unloading.

A matter which should at long last be solved, is an even distribution of shipments not excluding Sundays and holidays. The national economy insurs serious costs to support continuing transportation work schedule. Of course, we cannot expect a continuity of production over Sundays and holidays but this does not explain why the material to be shipped cannot be issued from storehouses and storage areas on labor holidays.

This especially applies to picking up coal from storage dumps and to shipping out cement, aggregates, foundry products and fertilizers on Sundays and holidays.

All these are important matters not only because the railroads are burdened this year with a relatively large increase but, above all, because the composition of shipments has been changed. This confronts railroad transport with the challenges which are no less complex than those faced to date. This is caused by a definite change of load composition towards bulk freight. Namely, out of 26 million tons of the anticipated growth of shipments carried by the standard guage railroads, almost 80 percent consists of bulk freight, chiefly coal and construction material. By industry, about 90 percent of the growth is due to the freight shipped by 5 industries: mining, metallurgy, chemical, construction and foreign trade.

Talking about construction, it should be remembered that it is concentrated in large urban areas and especially in the Silenian region. Along with mining and metallurgy transportation problems, this will constitute a serious transportation problem in this area.

More than ever, the effective operation of railroad transportation will depend on assuring the outward movement of shipments from the Silesian District Directorate of State Railroads.

This is also confirmed by the allocation of transportation tasks among district directorates of state railroads by the NPSC (Table 4).

Table 4

District Directorate of State Railroads	Shipments (Tone in	Share of total
	millions)	(percentage)
Central	37,0	7.5
Eastern	47.6	9.6
Sout he rn	46.9	9.4
Silesian	235.5	47.5
Northern	35.7	7.2
Lower Silentan	55.0	11.1
Western	20.8	4.2
Pomerantan	17.5	3.5
Total Polish State Railroads	496.0	100.0

We are dealing with the further aggrevated phenomenon of uneven territorial distribution of transportation tasks. It so happens that the majority of the above mentioned branches of the national economy are concentrated in those regions of the country where the load of the railroad net is already exceeding tolerable technical standards.

Another difficulty resulting from this composition of transportation requirements is the necessity to further increase the already troublesome for the railroad task of moving empty rolling stock, especially coal cars, to be loaded in Silesia. The coal shipments anticipated for the next year amount to about 168 million tons which constitute 34 percent of all shipments in 1980.

The conditions described above will have a decisive effect on the railroad operations next year. They demand, in addition to investment actions, further intensive changes in the organization and technology of transport.

investments, will be concentrated on the modernization and enlargement of the routes leading out of Silesia and on further build up of theinternal network and railroad facilities in Silesia. The following should be considered the most important: completion of the so-called eight outlets from Silesia, modernization of the Gniezno-Chojnice-Tczew-Gdansk-North Harbor line, construction of the connector Myslowice-Brezezinka-Jezor and opening of the Gliwice-Sosnica container station.

An a result of investments planned for 1980, 147 kilometers of new lines and second tracks will be opened and 426 kilometers of lines will be electrified including the following sectors: Biala Podlanka-Terespol, Herby Nowe-Wielum-Kepno, Goleniow-Swinionjacie, Zabrze-Mikulczyce-Fonowskie-Kluczborg, Zabrze-Biskupice-Gliwice-Makoszowy, Zabrze-Biskupice-Bytom, Niedobczyce-Wodzisław Slaski and Zgierz-Kutno-Florek.

Delivery of ore to Katowice Iron Works will be greatly improved thanks to putting into operation one of the largest railroad investments in recent years, namely the Iron Works-Sulphur Line.

In order to improve the condition of railroad tracks, plans are to carry out a program increasing major maintenance of railroad tracks in 1980, including replacement of 2,700 km of rails in addition to 2,050 km done in 1979. There are resources included in the plan to permit secondary replacement of 1,425 km of rails and replacement of 4,900 railroad ties.

In addition to the urgent necessity to improve the condition of railroad tracks there is also a serious necessity to improve the condition of rolling stock. For this purpose, the maximum increase of maintenance effort is planned. In the plan for 1980, the composition of the transportation department industry production has been changed to increase the proportion of production serving the maintenance needs while decreasing the new production,

In particular, it has been planned that the number of repairs performed in the rolling stock maintenance plants will increase substantially, namely: diesel locomotives by over 17 percent, electric locomotives by about 14 percent, freight cars by 16 percent and passenger cars by over 11 percent.

There is also an assurance that in 1980 there will be further deliveries of locomotives and railroad cars. Deliveries are anticipated of 200 diesel locomotives and 186 electric locomotives, including 90 ET22 locomotives, \$5 ET41 and 41 ER42 locomotives. Despite a decrease in the number of railroad cars delivered, the Polish State Railroads will operate a much more modern fleet of freight cars. The deliveries specified in the plan include: 6,000 coal cars, 1,320 flatcars, 1,390 dump cars, 1,630 tank cars, 800 special cars, that is a total of about 10,000 new cars. Thus, the railroad shipping achievement will depend on improved utilization of the newly delivered cars both in respect to their loading and turnaround. The achievement of planned result will depend mostly on the performance of field units. This applies equally to the network-wide tanks and to the sectors assigned to individual District Directorates of State Railroads. The distribution of tasks in respect to these two basic measurements among individual districts is shown in Table 5.

Table 9

District Directorate of State Ballroads	Car's static load (tons)*	Car's turnaround time (days)
Central	28.51	2,58
Eastern	32,03	2.19
Southern	33.08	2,23
Stlentan	37.82	2.63
Northern	29,52	2.53
Lower Silenian	30,74	1,56
Western	24.22	1,95
Pomeranian	29.75	2,25
Total	33,50	5.02

^{*}Own shipments.

The planned improvement of statis load is made possible by an increased share of bulk freight and an increased number of 4-axle cars. A lot will depend, however, on assuring that the cars having high load capability as used to carry that cargo. It should be a matter of principle that all 4-axle coal cars are sent to Silesia to be loaded with coal. The increased static load will also require increased supervision of rail-road static load will also require increased supervision of rail-road static load will also require increased supervision of rail-road static load will also require increased supervision of rail-road static load will also require increased supervision of rail-road static load will also require increased supervision of rail-road static load will also require increased supervision of rail-road static load will also require increased supervision of rail-road static load will also require increased supervision of rail-road static load will also require increased supervision of rail-road static load will also require increased supervision of rail-road static load will also require increased supervision of rail-road static load will also require increased supervision of rail-road static load will also require increased supervision of rail-road static load will also require increased supervision of rail-road static load will also require increased supervision of rail-road static load will also require increased supervision of rail-road static load will also require increased supervision of rail-road static load will also require increased supervision of rail-road static load will also require increased supervision of rail-road static load will also require increased supervision of rail-road static load will also require increased supervision of rail-road static load will also require increased supervision of rail-road static load will also require increased supervision of rail-road static load will also require increased supervision of rail-road static load will also require increased supervision of ra

To matisfy the plan requirements in respect to both basic measurements of railroad operations, it will be necessary to further improve the technology and organization of operating procedure, including the following:

--first, increase the scope of railroad service using direct-route and shuttle trains.

--percond, improve the organization of mending empty cars to the deficit areas, primarily empty coal cars to Silesia,

-- third, increase the proportion of 4-axle cars in the stream of empty coal cars sent to be loaded with coal.

--fourth, impose stricter accounting on customers for delaying and damaging cars,

--!ifth, improve the short and medium range shipment planning and strive to make the plans more realistic.

To sum up, it must be stated that despite a certain slow-down of the rate of growth of shipping targets in relation to the total transportation

system, the tasks set for the railroads are related to servicing the priority branches of the national economy and are significant and difficult. The planned carrying capacity has been determined at by assuming full utilization of all remaining reserves. To fulfill the plan built on such assumption will require a special effort by workers and efficient management of operations.

Simultaneous accomplishment of the task of restoring the track and reiling stock conditions to a satisfactory level is of no lesser importance than the fulfillment of shipping tasks. This will require very efficient cooperation between the operating and maintenance services.

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LONG-RANGE FREIGHT TRANSPORT SERVICES DESCRIBED

Warsaw EKSPLOATACJA KOLEI in Polish No 1, Jan 80 pp 4-7

[Article by Krzysstof Badach, Ph. D.: "Demand for Preight Transport by Rail Through 1990"]

(Text) Vigorous growth in the production of material goods through 1990 coupled with sustained rates of growth in general and residential construction within the territorial structure of production continuing in its present form will be principal factors in the national economy's increasing demand for freight transport services by rail.

According to estimates valid in early 1979, the volume of production of principal products in 1990 will be at least 3.12 billion tons, or 227 percent of the 1975 level. A major portion of this output is either forwarded to the transport network in small freight consignments or requires short-range transport services, or else, because of other reasons, does not or should not, involve rail transport services. Only 32.2 percent of total output in 1990 can be described as rail freight. By 1990, 88.8 percent more products in this freight category will be manufactured in comparison with the 1975 volume. It is estimated that, along with this increase in production, freight transport services by rail should gain approximately 100 million tons every 5 years to reach a level of 750 million tons in 1990.

A 65.4-percent increase in rail transport services over the 1975 level should be accompanied by a similar increase in freight-handling operations (from 719 million ton-operations in 1975 to more than 1.19 billion ton-operations in 1990) and a somewhat higher growth in rail transport operations from about 129 billion ton-kilometers [tkm] in 1975 to nearly 228 billion tkm in 1990 (that is, 86.5 percent more, Table 1).

To prevent possible misunderstanding it should be explained that these figures describe the national economy's demand for rail transport services determined for specified targets in production growth and in transport services broken down by transport branches. Verification of these targets as well as allowances for constraints in the possible growth of

transport capabilities of particular transport branches can cause rail transport tasks to be determined at altered levels in planning and even in scientific research work.

Table 1. Demand Forecast For PKP [Polish State Railroads] Freight Transport Services

(a) (b) Rok Wysaczegolnienie	1975	1980	1983	1990
Praewnay (w min t)	433,3	800,0	610,0	700,0
Dynamika (1975 - 100)	100,0	121,3	143,3	105,6
Prayronty wagiquine				
w 5-lectu (w %)	121,3	121,3	110,1	115,4
Praca przewosowa				
(w mld tkm)	129,0	160,0	192,5	227,7
Dynamika (1971 - 100)	100,0	124,0	140,2	176,3
Przyrosty względne				
w 3-lectu (w %)	130,3	124,0	120,3	118,3
Prace ladunkowe				
(w min tonooperacji)	718,8	878,9	1033,9	1100,4
Dynamika (1975 - 180)	100,0	122,3	143,8	165,6
Przyrosty względne				
w 8-leciu (w %)	124,1	122,3	117,6	115,1

Key:

- a. Itemization
- b. Year
- c. Transport (in million tons)
- d. Growth rate (1975 100)
- e. Relative increments over the 5-year period (in percentages)
- f. Transport operations (in billions of ton-kilometers)
- g. Freight-handling operations (in millions of ton-operations)

It should be noted that the forecast of rail freight transport presented in this article was developed assuming a further decrease in the transport ratio factor for the transporting by rail of 1 ton of:

-total output, and

-output likely to require rail transport, down to levels presented in Table 2.

Table 2. The PKP Transport Ratio Factor Forecast Per 1 Ton

Itemization	1975	1980	1985	1990
Total output	0.330	0.296	0.250	0.240

This drop in the share of rail transport in conveying a vast flow of cargo is chiefly due to changes in the composition and territorial distribution of this flow which entails specific modifications in the structure of freight transport services anticipated by the PKP. The more important of these changes are discussed in subsequent sections of this article.

Porecast For External Transport Services

Over the next decade or so the railroad will maintain its leading position as a means of technical exchange of commodities with foreign countries. The share of transport services with international connections in the total volume of rail transport will, in fact, decrease from 25.5 percent in 1975 down to 22.5 percent in 1990, but the railroads will still perform over 43 percent of total international transport services in 1990 (54.4 percent in 1975).

Polish foreign-trade freight transport through overland crossings will increase from nearly 55 million tons in 1975 to almost 82 million tons in 1990, with the Polish-Soviet border crossing as the dominant transport direction (approximately 25 percent of exports and 75 percent of imports transported in 1990). An important transport link in our commodity exchanges with the Soviet Union will be provided by the 400-kilometer broad gage rail line which is expected to accommodate in 1990 a flow of ore, coal, sulfur and grain totaling 24 million tons. It is assumed likewise that coal will be hauled on this line within the domestic link.

Intensified freight transport services for foreign trade enterprises [phz] should be expected across Poland's southern border (nearly 30 percent of phz freight), chiefly under agreements with CMEA countries.

Foreseeable increases in commodity exchanges by sea routes will cause corresponding increases in incoming delivery and outgoing delivery of rail freight. It is estimated that phz freight traffic in both directions via seaports will grow from 45 million tons in 1990, of which more than 50 percent will pass through the Gdansk-Gdynia port complex. In transit shipping, directions along the geographical parallel will be dominant (nearly 65 percent of the transport volume). Another transit area where vigorous growth is noted is rail-and-sea transport (21 percent in 1975 and 32 percent in 1990), provided mostly by the Szczecin-Swinoujscie port complex.

Forecast of Interbranch Relations

In 1975, approximately 59 percent of all rail-conveyed freight was delivered and received on railroad sidings. Nearly 30 percent of all freight required incoming or outgoing delivery by truck, while 11 percent was delivered by standard gage rail transport, chiefly on the links with river ports and seaports. By 1990, due to a planned concentration of deliveries and receptions of freight within the PKP [Polish State Rail-roads] system requiring elmination of a number of rail sidings with low rail traffic, the share of transport services between railroad sidings may drop to 56 percent, while there will be a slight increase in freight transport by rail in combination with truck transport and inland water-way transport services. These structural changes are presented in more detail through data given in Table 3.

Table 3. Forecast of Freight Transport Composition in Inter-Branch Links (in percentages)

	(a) Wyssrzegól- Rienis	(b)	Transport ()	Transport (P)	Zepus o	Transport n.	Sabite (B)	(h)
		1975	50,4	30,0	0,6		10,4	100.0
(1)	Transport	1980	56,1	29,8	1,2		10,9	100.0
	kolejowy	1985	54,0	30,9	, 1,6	•	10,5	100,0
		1996	56,5	31,5	2,5	0,3	9,2	100,0

Key:

- a. Itemization
- b. Year
- c. By rail
- d. By truck
- e. Inland waterway

- f. By pipeline
- g. Other transport branches
- h. Total
- 1. Rail transport

Forecast of Freight Transport Composition By Category

Nearly 56 percent of the total volume of rail transport services in the forecast period will be represented by three groups of freight:

	1975	1990
Hard coal	33.0 percent	27.1 percent
Metals and manufactured goods	9.4 percent	10.8 percent
Other kinds of cargo	13.5 percent	18.0 percent

The above-listed groups are of similar importance in the railroads' expected performance in transport operations and in related cargo-handling operations. In shipping construction materials the railroads will participate in transporting construction aggregate from the sites of its concentrated extraction or processing to meet the needs of house-building plants, and concrete products and prefabricated products manufacturing centers. There is a necessity for a particular level of stone transport by rail because of stone extraction centers located in several regions while medium-size and major users of stone materials are scattered over the entire territory of the country.

Table 4. Forecast For Freight Transport by Standard Gage Railroads

(a) Grapa (b) Wegnet kantlemay (c) Wegnet kantlemay (d) Wegnet kantlemay (e) House (f) Kantlemate (f) Kantlemate (f) Kantlemate (f) Kantlemate (g) House (g	en (a)	_	1976		•	1980			1962			1970	
(a) Wegget kannlenny 190,6 419 289, 186,6 40,5 386,3 37,9 338,9 381,4 619, 190,6 41,9 21,1 22,6 51,1 33,9 36, 619, 17,9 18,9 18,9 18,9 18,9 18,9 18,9 18,9 18	(a) Grupa Iadunkowa	-	**	м	-	61		-	*	•	-	•	•
(d)Wester branchy koke 159 34 352 149 443 321 125 51 315 350 173 (e)Nindy (f)Kammen 129 67 334 336 115 695 119 149 364 360 173 (f)Kammen 129 67 334 336 115 695 119 149 364 369 173 (f)Kammen 129 183 52 343 133 441 125 119 34 342 345 135 131 (g)Nactic rayroby 153 153 143 133 141 125 119 149 149 149 149 149 149 149 149 149	(c)Weggel kamienny	149,6	400	219,9	97891	49,5	288.2	195,5	57.9	328.9	203.4	*19	335.0
Columbia	(d)Wettel brunatny i koke	15,9		26.2	6'01	3	177	22.6	5.1	35.9	26.0	5	3.4
(a) Normanie (b) (b) (c) (c) (c) (c) (c) (c) (c) (c) (c) (c	(e)Hudy	23,8		33.4	35,0	11.6	50	41.9	14.9	8	28,3	57	71.0
(a) Franck i twire (b) Stope 1 paratwory nattowe 155	(f)Kamienie	29.2		51.2	36	9,2	61.2	41.2	12,8	77.6	53.6	17.2	3
(1) Mediale i wyroby naftowe 15.8 5.5 24.3 15.3 4.1 22.6 21.0 5.0 20.0 24.3 4.7 4.0 24.6 13.2 102.3 70.0 15.7 134.4 89.9 21.1 (1) 0.5 14.5 14.0 24.6 13.2 102.3 70.0 15.7 134.4 89.9 21.1 (1) 0.5 14.5 14.0 24.5 14.5 14.0 24.5 14.5 14.0 24.5 14.5 14.0 24.5 14.5 14.0 24.5 14.0 24.5 14.0 24.5 14.0 24.5 14.0 24.5 14.0 24.5 14.0 24.5 14.0 24.5 14.0 24.5 14.0 24.5 14.0 24.5 14.0 24.5 14.1 24.5 14.0 24	(g)Piasek i twir	20,0		30,5	27.5	3.5	42.6	20,0	2.8	9	31.6	23	**
(A) Compared to wyrothy (425 10.5 74.0 36.5 11.2 10.2 10.0 16.7 136.4 09.5 21.7 (A) Compared to the compared to the control of	(h)Ropa i przetwory naftowe	15,8		3	15.3	4.1	22,6	21.6	3	30,0	25	5,7	28.5
(k)Certain (1) Could (1) C	(1)Metale i wyroby	42,5		750	3	13.2	102.8	20,0	16.7	128.4	2	. 12	345.9
(a) Nawoay (b) Nawoay (c) Nawoay (d) Nawoay (e) Nawoay	(j) Couls	1,2		2	2	0.3	23	1.9	***	52 /	3,6	0.7	2
(1)Nuwony (2)Inne artykuly chemiczne (3) 342 342 342 1342 1343 43 1343 1343 1343	(k)Cement	211		19.5	17.5	3.6	7	21.8	3	*	11	2	27.0
A	(1)Nawory	15,5		30.8	17.2	2	n	n n	3	27.4	111	7.4	31.0
(a) Zaboste (b) Zaboste (cukrowe	(m)Inne artykuly chemiczne	14,5		34,6	5	3	200	19.5	1.1	32.5	11.7	2	-
(a) Buraki cukrowe (b) 2.7 0.4 4.1 2.0 0.6 2.3 4.0 0.6 4.4 3.0 0.4 4.1 3.0 0.4 4.4 3.0 0.4 4.1 3.0 0.4 4.4 3.0 0.4 4.1 3.0 0.4 4.4 3.0 0.4 4.1 3.0 0.4 3.1 3.0 3.0 0.4 4.1 3.0 0.4 4.1 3.0 3.0 0.4 4.1 3.0 0.4 4.1 3.0 3.0 0.4 4.1 3.0 0.4 4.1 3.0 3.0 0.4 4.1 3.0 0.4 4.1 3.0 3.0 0.4 4.1 3.0 0.4 4.1 3.0 3.0 0.4 4.1 3.0 0.4 4.1 3.0 3.0 0.4 4.1 3.0 3.0 0.4 4.1 3.0 3.0 0.4 4.1 3.0 3.0 0.4 4.1 3.0 3.0 0.4 4.1 3.0 3.0 0.4 4.1 3.0 3.0 0.4 4.1 3.0 3.0 0.4 4.1 3.0 3.0 0.4 4.1 3.0 3.0 0.4 4.1 3.0 3.0 0.4 4.1 3.0 3.0 0.4 4.1 3.0 3.0 0.4 4.1 3.0 3.0 0.4 4.1 3.0 3.0 0.4 3.0 0.4 3.1 3.0 3.0 0.4 3.0 0.4 3.1 3.0 3.0 0.4 3.0 0.4 3.1 3.0 3.0 0.4 3.0 0.4 3.1 3.0 3.0 0.4 3.0 0.4 3.1 3.0 3.0 0.4 3.0 0.4 3.1 3.0 3.0 0.4 3.0 0.4 3.0 0.4 3.1 3.0 3.0 0.4 3.0 0.4 3.1 3.0 3.0 0.4 3.1 3.0 3.0 0.4 3.1 3.0 3.0 0.4 3.1 3.0 3.0 0.4 3.1 3.0 3.0 0.4 3.1 3.0 3.0 0.4 3.1 3.0 3.0 0.4 3.1 3.0 3.0 0.4 3.1 3.0 3.0 0.4 3.1 3.0 3.0 0.4 3.1 3.0 3.0 3.0 0.4 3.1 3.0 3.0 3.0 0.4 3.1 3.0 3.0 3.0 0.4 3.1 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0	(n)Zbote	7.4		1.1	2	2.5	12.6	7.7	22	12.2	7.5	2,1	=
(q) lune plody raine 9.7 9.4 4.2 2.7 9.4 4.1 3.0 9.4 4.4 3.0 9.4 (q) 10.0 1.2 20.2 15.0 3.8 (q) lune plody raine (h) lune plody ra	(o)Zremajaki	1.7		2	25	9.0	2.4	23	6,7	2,1	2	3	2
(q)lnine plody raine (q) H42 40 219 152 04 23,1 132,1 43 124 13,6 4,7 (q) Price and coke (q) H42 40 219 152 04 23,1 132,1 25,6 13,5 16,4 13,3 39,6 13,6 13,1 13,1 13,3 39,6 13,6 13,1 13,1 13,3 39,6 13,1 13,1 13,1 13,1 13,3 39,6 13,1 13,1 13,1 13,1 13,1 13,1 13,1 13	(P)Buraki cukrowe	2.7		4.2	2.7	9.4	4.1	2	**	4.4	3.6		2
(r)Drewno i wyroby (r)	(d) lune plody roine	8,2		14.2	10,9	2.8	16.0	13.0	3,2	200	15,0	3.5	11
(a)Purnatule (b) 14.5 103.8 78.6 22,1 122.7 57.7 28.6 106.4 135.3 39.9 (c)Trantyt (c)Transit (c)Transport (c)Transpor	(r)Drewno i wyroby	14.2		21.9	15.2	3	17.	15,4	7	22.4	15,6	Ş	22.6
(c) Frankyt (c) Frankyt 17,4 10,4 5,5 19,6 11,5 7,5 22,6 13,5 19,6 13,9 13,9 (u) Razem 453,5 129,0 718,9 330,0 160,0 678,9 630,0 192,5 19339 130,0 227,71 1 - przewazy w min ton, 2 - przer lasmanew w min ton, 1 - przewazy w min ton, 1 - przewazy w min ton, 2 - przer lasmanew w min ton, 1 - przer lasmanew w min ton, 2 - przer lasmanew w min ton, 1 - przer lasmanew w min ton, 3 - przer lasmanew w min ton, 1 - przer lasmanew w min ton, 45, Bricks t. Transit 46, Cement u. Total 1 - Shipments in million ton 2 - Transport operations in	(8)Pornstale	61.0		103,8	78,6	12,1	122.7	55.7	29.6	106.4	135.3	39.0	237,0
U) Razem	(t)Trangt	17,4		3,5	501	11,5	2	22.6	13.5	901	20.00	15.9	14.1
Freight group Freigh	(n)Rarem	453,5	-	718.5	9300	160,0	678.0	636.0	192,5	1623.9	130,0	277.7	1980.4
Freight group Year Year Hard coal Lignite and coke D. Bricks t. Transit u. Total 1. Fertilizer 1. Shipments in million 2. Transport operations	1 - przewary w min ton,	1 - peace	-		mis is	d.	-	- 1	or lade		1	1	Guesa
Hard coal 1. Fertilizer 1 Shipments in million Lignite and coke m. Other chemicals 2 Transport operations			ricks				i	Tra	iste				
Hard coal 1. Fertilizer 1 Shipments in million Lignite and coke m. Other chemicals 2 Transport operations			ement				;	Tota	7				
Lightte and coke m. Other chemicals 2 Transport operations		1. F	ert11	Izer			-	- Ship	ment	s in	#4111	lon to	Suc
	Lignite and coke	0	ther	chemi	cals		2-	- Tran	PEDOT	t one	ratio	ins fr	n bi

0						
		Freight group	1.	1. Bricks	t. Transit	
	ò	Year		Cement	u. Total	
		Hard coal	1.	Fertilizer	1 Shipments in millio	n tons
	Ď.	d. Lignite and coke	ė	m. Other chemicals	2 Transport operations in billio	s in billio
	•	Ores		Grain	ton-kilometers	
	•	Stone	0	Potatoes	3 Cargo-handling operations in	ations in
	*	Stand and gravel	9	Sugar beets	million ton-operations	suo
	þ.	Crude oil and petroleum	. 6	Other farm produce		
		products	14	Lumber and wood		
	+	Metals and metal		products		
		products		Other		

In principle, stabilization of the present level is assumed for transport of farm produce and foodstuffs.

In transporting other types of freight, levels of future demand are determined either by major concentrations or deliveries and receptions or by haulage of considerable length coupled with concentrated delivery and reception within the system of transporting via bulk freight bases. Detailed data on expected volumes of transport services, transport operations and cargo-handling operations in a breakdown by selected freight groups is presented in Table 4.

Forecast of Volume Of Freight Deliveries

It is seen in Table 4 that nearly 80 percent of the volume of rail-carried freight should be classified as bulk cargo, marked by a low processing factor, low value per ton and a matching scale of production. It is worth adding, however, that these kinds of freight require relatively long hauls. These two norms (type of cargo and length of haul) taken together determined the assignment of this bulk of freight to rail transport. A similar volume of bulk cargo (chiefly construction materials and farm produce) requires significantly shorter hauls and is, therefore, more likely to tend to be transported by truck.

In recognition of the arbitrary nature of these norms, the breakdown of the volume of freight into rail and truck transport additionally included analysis of data on producers' planned volume of daily average deliveries of freight in 1980-1990.

It was assumed in that analysis that shipments forwarded to the transport system not exceeding 50 tons per day can be transported by truck regardless of the length of haul. If this, justifiably objectionable norm is accepted, the composition of PKP freight in terms of daily forwarding is as shown in Table 5.

Table 5. Composition of Freight Volume in Rail Transport by Size of Daily Delivery (Excluding Transit)

	(b)			ści dzi wej (w	ennej (partii
(a) Rok	50— 99	100— 499	500 — 1499	1500 2499	penad 2500	zem
1980	9,8	17,9	25,2	14,9	32,2	100,0
1965	10,3	18,1	24,7	14,5	32,4	100,0
1990	9,2	17,2	25,4	16,5	31,7	100,0

Key:

a. Vear

- c. Over
- Quantity ranges of daily freight consignment (in tons)
- d. Total

It is worth noting that the length-of-haul criterion was applied to two lowest quantity ranges of daily forwarding volume: from 50 to 99 tons the length was at least 150 km and from 100 to 499 tons the length was at least 100 km.

The length-of-haul criterion was not applied with regard to the other quantity ranges of daily forwarding volume, recognizing that the volume of flow of forwarded freight constituted a superordinate criterion. For example, it was considered advisable to burden the PKP with the abovementioned haulage of approximately 25 million tons of metal in turnovers between metallurgical plants, forwarded to the transport system in batches of 1,000-2,000 tons per day, despite the fact that these hauls are generally within a 50-kilometer range.

Regardless of the arbitrary criteria applied in identifying cargo for rail transport and irrespective of the quality and reliability of data obtained in this field, there are grounds to believe that existing deployment of extractive industry centers in a small region while user locations are dispersed over the country's entire territory renders it necessary to transport large quantities of freight over considerable distances and, at the same time, creates favorable conditions for growth in rail shipping because of relatively high concentration of freight consignments. It should be emphasized that planned construction of bulk cargo bases will result in even higher concentrations of freight forwarding, including consignments regarded as likely to be transported by motor transport. Thus, demand for rail transport services forecast in this article can be viewed as the volume of potential needs of the national economy in this field, assuming that the production growth through 1990.

Forecast For Territorial Structure of PKP Transport Services

In 1975, there were 14 provinces from or to whose territory consignments of at least 10 million tons per year were received or delivered. This figure will rise to 23 in 1990. Despite this, however, no major changes should be expected in the territorial structure of freight transport on the PKP system. Katowice Province will continue to forward for delivery more than one-third of the PKP's total volume of freight (more precisely, 34.4 percent in 1975 and 35.5 percent in 1990). Another third of freight forwarded to the PKP will come from the territory of 11 provinces, and the remainder of PKP freight will be forwarded from 37 provinces. This 1: 11: 37 ratio rather symbolically depicts the territorial breakdown of freight deliveries to the PKP system.

Territorial distribution of receptions of freight transport by the PKP is more uniform. One out of 8 tons of PKP freight is destined for the Katowice province (12.7 percent in 1975 and 13.4 percent in 1990), but total receptions of 10 other provinces with the largest shares account for only 32 percent of the total of all recipients. Table 6 provides

information on the shares of 11 selected provinces in total deliveries and receptions of freight in 1975 and in 1990.

It is worth noting that those provinces' rail networks are handling, on top of their own locally generated deliveries and receptions, transit services for freight to and from other provinces and international transit. In consequence, a larger portion of increment in transport services will encumber the main lines whose reserve transport capabilities are limited even at this time. Considerable concentration of deliveries and receptions in provinces already suffering from manpower shortages calls for especial attention to be focused on maximum mechanization of cargohandling operations in those provinces and on preparation of suitable storage facilities, permitting the increasing volume of freight transport services to be performed by heavy freight trains and other kinds of complete-train shipments.

Table 6. Shares of Selected Provinces in Freight Deliveries and Receptions Over the PKP System (in Percentages)

(a)	19	75	1	990
Wojewodztwo	(b)	(c)	(b)	(c)
) Bydgoskie	1,4	2,5	1,5	2,6
) Częstochowskie	2,0	2,6	2,1	2,8
) Gdańskie	5,1	4,4	4,3	4,0
) Jeleniogorskie	3,1	1,4	3,4	1,4
) Katowickie	34,4	12,7	35,5	13,4
) Miejskie				
krakowskie	3,5	4,3	3,6	4,5
) Opolskie	4,1	4,2	4,5	4,2
) Poznańskie	0,8	2,5	0,8	2,5
.) Szczecińskie	4,0	3,9	4,2	4,3
i) Walbrzyskie	3,1	2,1	3,3	2,1
) Warszawskie	0,5	3,5	0,6	3,7
) Razem	62,0	45,1	63,8	45,8

Key:

- Province
- Delivery b.
- c. Reception
- d. Bydgoszcz
- Czestochowa e.
- Gdansk
- f. Jelenia Gora

g.

Katovice

- City of Cracow
- 1. Opole
- Poznan k.
- 1. Szczecin
 - m. Walbrzych
 - Warsaw n.
 - Total

In summary, it should be stressed that the results of studies on a successive version of freight transport forec. o not indicate a substantial drop in the freight traffic forwarded KP system through 1990. The degree of complexity in tasks the PKP is assigned is indicated, among other things, by existing needs to increase transport services through 1990 by as much as they have grown between now and the year 1950. The bulk of this increment in transport services will occur in a relatively small segment of the rail network that is already handling capacity traffic. Accordingly, unless significant modifications in organization and technology are effected in all the components of transport processes in their entirety (including marginal operations), it will be difficult to assure the flow of several hundred million tons of cargo over the main PKP network. Preparation and application of comprehensive organizational and technological solutions enhancing the overall transport capability and reliability of rail transport will largely condition the degree of satisfaction of continually increasing transport requirements of a vigorously growing national economy.

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STEEL-SULFUR RAILROAD LINE OPERATION DESCRIBED

Warsaw EKSPLOATACJA KOLEI in Polish No 1, Jan 80 pp 8-11

[Article by Marek Domanski, M.Sc.: "The LHS Steel-Sulfur Line Main Line and Its Significance"]

[Text] In December 1979 work was begun on preliminary operation of the largest post-World War II railroad investment, the 400-kilometer steel-sulfur main line from Hrubieszow to the Katowice Steelworks. Both the completion and operational startup of a transport service line of this caliber are without precedent in the PKP's [Polish State Railways] post-war history, so the greater appreciation is due its designers, builders, investor supervisory bodies and operation and maintenance units of the Eastern and Silesian District Directorates of State Railroads [DOKP] for their joint achievement in a great endeavor.

On its 35th anniversary, the PKP received a main rail line whose potential and operational significance are unmatched both in terms of more efficient transport service and in its importance for east-west commodity exchange.

The growth of Polish metallurgy, dramatically accelerated after 1970 in connection with the construction of the Katowice Steelworks, requires deliveries of many million tons of iron ore, unavailable in Poland. Shipments of this raw material, primarily from the Soviet Union via a large transloading station of Zurawica Medyka or through other USSR border crossings, nearly totally utilizes transport capabilities on the Zurawica-Przemysl-Krakow-Katowice line.

Increases in Soviet ore deliveries by 1985 are expected to amount to over 8 million tons per year, with the Katowice Steelworks ultimately using up substantially larger quantities of this raw material.

Transport services of this magnitude could not be effected under existing conditions with current levels of outfitting in border stations and current throughput capabilities of railroad lines as well as processing capabilities of stations and other systemic components of the PKP's transport capability.

In order to adjust those capabilities to present and future needs, enormous investment inputs would have been necessary. Two directions were considered in seeking solutions: expansion of existing lines and transport systems and construction of new links and a new border site.

Studies and comparative analyses demonstrated that economically and operationally most feasible was the construction of a new rail link including, or excluding, ore transloading in the border area.

On the basis of detailed analysis, it was decided that the most advisable and economically justified was a Brubieszov-Katowice Steelworks line with neither transloading of ore nor reconversion of Soviet Railroad cars on 1,435-millimeter trolleys, to be built as a line with a 1,520-millimeter-wide track.

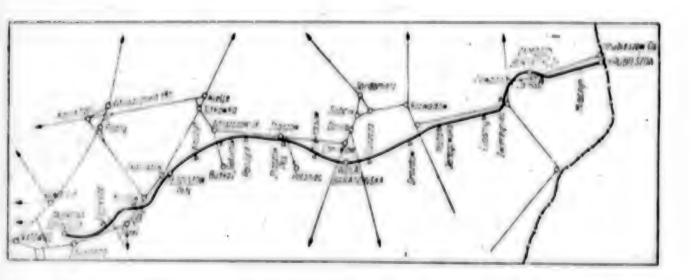


Figure 1. Diagram of the Steel-Sulfur Rail Line During the First Phase of Operation

Work on the Project

Design, research and preparatory work prior to the construction of the Hrubieszow-Katowice Steelworks line required the engagement of numerous design offices, enterprises and research centers, many of which were from outside of the ministerial sector. Involved were 21 design offices, and centers from various ministries, eight geological and prospecting enterprises and three higher schools of technology.

Two of the decisions concerning the new main line are of primary importance: the Government Presidium Decision No 71/75 of 6 June 1975 on assuring transportation of imported ore from the Soviet Union to the Katowice Steelworks and the Central Ore Storage Site in Slawkow, and the Government Presidium Decision No 12/77 of 4 February 1977 on constructing the Hrubieszow-Katowice route.

How speedily action was taken can be gathered from the fact that as early as 30 September 1975, the development of technical and economic guidelines was completed and a "full-steam-shead" order was given to technological design work.

Since approximately 90 percent of the line runs through areas coming under the Eastern DOKP (the remainder is under the Silesian DOKP), its direct investor became the WDOKP in Lublin within whose framework a directorate for the Hrubieszow-Ratowice Steelworks Line [DLH5] was established with a permanent location in Zamosc. The accepted system was one with an overall contractor (the WDOKP) with local handling of earth and track work on sections where the LHS parallels existing sections of standard gage rail lines. Project organization jointly conducted by 60 subcontracting enterprises was a function of a tremendous range of work.

Profile of the Line

When determining the course of the line horizontally and vertically, the guiding principle was to let it run as far as possible alongside existing sections of PKP lines, only exceptionally departing from this principle (due to absence of line, area development or layout, or differing line parameters).

There were reasons for this approach: on the one hand, there was a limited number of expropriations and takeovers of farm and forest land, on the other hand, highly mechanized earth and track work permitted utilization of operating 1,435-millimeter tracks. The LHS main line, 397 km in total length, runs for the most part parallel to existing sections of standard gage lines, and only a portion of it uses a new route.

Following are major technical and operational parameters of the main line:

- --a minimal degree of curve of 800 m, with deviations where advisable, and a 10,000 m minimal radius of vertical curve;
- --reliable gradient of 9 percent on the routes, 1.5 on the stations, and 4 percent on nonstop passing spurs without a locomotive;
- --track structure with 5-65 rails on wooden ties, standard R-65 turnouts with a 1 : 9 angle and curve radius of 200 m;
- -- intertrack space of 5.30 m on passing spurs and 6.0 m on stations;
- --useful length of tracks 850 m (axles 150);
- -- maximum speed 100 kmph;
- --permissible gross weight of train 4,000 t, to reach 4,800 t on lines with electric traction;
- -- dual drawn locomotives 2 ST44.

The distribution of passing spurs was determined with the aid of a digital computer.

Range of Construction Work

The caliber of this project in its entirety is demonstrated by the following figures:

--more than 1 million cubic meters of earthwork (land fills and excava-

--a total of 560 engineering structures including 50 rail bridges with total length of 2,535 m, 54 rail overpasses, and 19 road overpasses;

--more than 300 buildings for technical, operational and social purposes totalling 700,000 cubic meters;

==600 km of (broad and standard gage) trackage;

-- over 200 km of access roads and work roads;

==41most 2,200 apartments for personnel.

The LHS main line was built by over 60 specialized enterprises from various parts of the country, including 17 in earth-working, 8 in track laying, 10 in engineering structures, 7 in erecting buildings, 14 in railroad traffic signalling systems and communications, 15 in power systems and removal of obstacles (pipelines, cables), and 4 in road building. Equipment deliveries were handled by 20 enterprises, factories and other plants.

In the peak period of work on the main line there were more than 6,200 persons using over 200 excevators, 770 vehicles of various types, 380 dump cars, 440 bulldozers, loaders and scrapers, and more than 50 cranes. Owing to deliveries of equipment and materials from the Soviet Union, the line was completed on schedule. Under their training program, considerable assistance was rendered by the Polish Army engineering units.

It was the largest investment project in the Polish railroad system since World War II.

Premises For Transport Work Organization

In the first year of operation, the line is expected to carry 7 million tons of ore imported from the Soviet Union and 3.6 million tons of other freight.

Freight will be transported in shuttle trains with no change of gross weight on border stations and along the routes. They will be heavy freight trains of 4,000 tons with dual drawn ST44 locomotives and without conductor crews.

Essential technical procedures connected with releasing-receiving routines, customs, border crossing and dispatching will be followed at the Brubieszow border station. At Dabrova Gornicza station located in the vicinity of the steelworks, groups of connected railroad cars on the PKP-steelworks siding link will be released and received back.

Both stations will be equipped with suitable support facilities: fuelfilling stations, inspection pits with supporting technical facilities and workshops, car-repair posts, auditing posts, road-service-support facilities, administrative and utility buildings for traffic personnel and trade-transport service with accommodations—at the Hrubieszow station—for many nonrailroad cooperating units (Hartwig, the Customs Office, and WOP [Frontier Guard]).

Technical inspections of all odd-numbered and even-numbered trains as well as detachment and repair of broad gage cars in a railroad-car shop (which in the first stage of operation is ranked as a railroad-car repair division) are planned to be conducted at the Wola Baranowska station. Car service will have support facilities including a repair shop (two inspection pits) with workshops and crew comfort facilities and a railroad car technical inspection post.

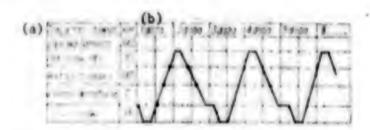


Figure 2. Diagram of LHS Rolling Stock Rotation During the First Stage of Operation

Key:

- a. Station of origin or return
- b. 24-hour period

Locomotive crews of the WDOKP and SDOKP will change shifts at the Sedziszow Polnoc Station (switching center). In the future, this station will have a railroad-car technical inspection post, a lodging house and a dispatch office for locomotive crews. The station will run the tally for R41 crossing at the interface between two district directorates.

Locomotives and switching crews will be employed at Hrubieszow Zamosc Bortatycze, Wola Baranowska and Dabrova Gornicza stations. Railroad-car dispatch offices will be established at the Hrubieszow and Dabrova Gornicza stations, and there will be railroad-car station offices at Wola Baranowska and Sedziszow Polnoc. Administrative management units for the traffic mervice were entablished at Brubieszow, Zamone Bortatycze, Wola Baranowska, Sedziszow Polnoc, and Dabrowa Gornicza stations.

Transport operation management will be carried out from a single LHS dispatch center located in Zamosc. All of the LHS line's notification posts will be outfitted with selector communication devices.

Organizationally, maintenance service provides for establishing seven road sections (Brubieszow, Zamosc Bortatycze, Bilgoraj, Wola Baranowska, Staszow Poludnie, Sedziszow Polnoc and Dabrowa Gornicza), five traffic signalling sectors (Zawada, Zwierzyniec, Wola Baranowska, Staszow Poludnie and Dabrowa Gornicza), six electric-power sections (Brubieszow, Zamosc Bortatycze, Wola Baranowska, Dabrowa Gornicza) plus the two existing ones in Staszow and Sodziszow.

For the purposes of the first stage, a train schedule was developed so as to allow for several-hour-long periods of track closing for continuing construction (second stage). To avoid difficult startups of heavy freight trains, traffic-flow charts were constructed so as to minimize stoppages of odd [loaded] trains at intermediate notification posts. In consequence, a train's travel time in this direction is nearly 20 percent shorter than corresponding travel time for the even [empty] direction.

Scheduled commercial speed of the trains will not be impressive during the first stage of operation since it was accepted that permissible speed of ore-hauling trains, as determined in the course of terminal receptions, will on no route exceed 40 kmph.

The Hrubieszow and Dabrowa Gornicza stations will function as switching stations within the organization of traction service, with a center for locomotive crews at Dabrowa and, for car-servicing crews, at the Dabrowa Gornicza car depot and the railcar-repair division in Hrubieszow.

Among the remaining three technical stations: Wola Baranowska, Sedziszow Polnonc and Zamosc Bortatycze, the last one will be the site of the main locomotive shop for broad gage diesel locomotives, along with a locomotive depot, support facilities for repairs and for personnel (center for locomotive crews), a fuel station, sandblasting shop, water-treatment plant and other technical installations.

At Zamosc Bortatycze Station, locomotives will be changed in all even [empty] trains and locomotives pulling odd-numbered [empty] trains will be refueled.

Servicing coverage for the next stage of operation was determined in the following manner:

-- the Zamosc Bortatycze center serving the Hrubieszow-Wola Baranowska-Hrubieszow section;

-- the Wola Baranowska center serving Wola Baranowska-Sedziszow-Wola Baranowska section; and

-- the Dabrowa Gornicza center serving the Dabrowa Gornicza-Sedziszow-Dabrowa Gornicza section.

This cautious approach conceals a reserve capacity, since once the period of roadbed stabilization and surface reinforcement is over, the permissible speed is assumed to be 100 kmph and maximum speed of ore trains 70 kmph.

To streamline the management and efficient operation of the line, a computerized information system will be introduced, centered on tracing Soviet Railroad's car utilization and stay on the PKP network and on monitoring the cars' length of stay in the PKP system and at loading sites. In the future, an expanded system will include determination of railroad car rental fees, and monitoring locomotive turnover, train operations and rolling stock. The Hrubieszow, Zamosc Bortatycze, Wola Baranowska and Dabrowa Gornicza stations and, at a later date, the Sedziszow Polnoc Station, will be equipped with teleprinters.

Besides this investment project's broad substantive range, a problem of no smaller magnitude was posed by organizational preparation of the line for operation. Staffing was of topmost importance in this area. In the initial stage of operation, the entire main line will provide employment for more than 1,600 persons of whom most (approximately 53 percent) will be in traction service.

Employee recruitment, training and social/residential matters required major organizational efforts. In traffic service alone, it was necessary to hire and train more than 76 traffic duty officers, 84 signalmen and switchmen, 44 shunting-crew workers, not to mention railroad-car office personnel and other administrative personnel.

It took a major effort to prepare indispensable technical documentation (technical regulations, process charts, train schedules and publications). Commuting to work is a source of definite difficulties. Six pairs of general-access passenger trains are planned for operation on those LHS sections that are in contact with the standard gage lines. On other LHS sections, personnel are transported to their posts by car.

The LHS Main Line Is an Investment for the PKP

Full operational results of the LHS construction will take some more time in showing. Even now, however, it is known that the Malaszevicze region, especially the Zurawica-Medyka Transloading Station, will be affected by the operation of the LHS. The Przemysl-Krakow main line will serve for ore transportation to the Lenin Steel Works, and even this activity will be to a certain degree reduced once the Central Ore Storage Site in Slawkow is completed.

Coal and sulfur exports to the Soviet Union and to other countries will improve transport situation on traditional east-west transport routes and on border crossings between the PKP and the Soviet Railroad (Dorohusk, Zubki, and other locations). The LHS creates many convenient transport opportunities between the Polish People's Republic's eastern frontier and Silesia.

The new line will make it possible to import cotton, cellulose and grain as well, once suitable elevators and warehouses are built. Exports on this line can include textiles, readynade clothing, household goods, and even cosmetics. Trade exchanges with the Soviet Union and its neighboring countries will be considerably facilitated.

The LHS main line will thus serve international needs as well, while offering prospects for improving transport services in many regions of Poland. The railroad people and regional economic centers are certainly not going to waste this opportunity.

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ROLE OF ECONOMIC INLICATORS IN SELF-ADMINISTRATION VIEWED

Bucharest REVISTA ECONOMICA in Romanian No 22, 30 May 80 pp 7-8

Article by Gh. Boulescu, director in the Ministry of Finance: "Fulfillment of the Economic and Financial Indicators, a Condition for Applying the Principles of Self-Administration"

Text The application of the new economic and financial mechanism presupposes, above all, the fulfillment of the plan targets for net output and physical output, of the planned profits. Only on this basis is it possible to form the funds for the development of society, for the sharing of profits with the working people. The fund for sharing profits with the working people and, implicitly, the increasing of the possibilities for worker personnel to have higher earnings are directly connected with the labor put forth and the results obtained in fulfilling the production tasks, in reducing the material expenditures, in properly providing for exportation and in raising the efficiency of all economic activity.

The transformation of quantity into a new quality, a central objective of the economic and social activity in the current stage, presupposes, objectively, the putting of the criterion of economic efficiency first and foremost, the functioning of the new economic and financial mechanism in the best way. The expansion of profit's role in all economic and social life has an important role in this context.

As a part of the newly created value in the productive activity of the economic units, the profit is determined by deducting from their financial results the share for society of a part of the value of the net output under the conditions established by law, as well as the expenses that are borne directly from the results. In essence, the financial results depend on the income and expenses that each unit has in a certain period. The income of each unit is formed from its receipts from the commodity output achieved, the work of building-assembly, services, sales of goods or other activities, and the expenses represent the total of the material and mometary consumptions—production or circulation costs—effected for achieving the respective receipts.

The value of the net output, including the newly created value in productive activity, has as main elements: the share for society of a part of the newly created value, the wages of worker personnel and other rights of theirs, the expenses for scientific research, technological development, and introduction of technical progress, the tax on the total pay fund, the contribution for social security and other expenses with live labor, and the profit. In practice, the value of the net output represents the difference between the value of the gross output and the material expenditures.

it clearly follows that, by means of content and component elements, the net output synthesises the effect of increasing the physical output and that of using the material resources to obtain this physical output. Under these conditions, the ways of achieving and increasing the net output are concretised in increasing the efforts:

To increase the additional quantities of physical products meant for concrete social needs: the market supply, the providing of the raw materials and supplies needed for production, the providing of the materials and equipment needed to carry out investments, and exportation;

To economise and better utilise rew materials, supplies and fuel and to use fixed assets as intensively as possible.

Along with increasing the quantities of physical products manufactured, that is, achieving the commodity output, a number of other factors that are of a nature to qualitatively increase the labor have an important role in increasing the net output, namely: the sensible use of the work force and the raising of labor productivity, the high quality of products and services, the promotion of technical progress and the application of the results of scientific research in order to modernize production, the respecting of consumption rates and quotas, the continual reduction of production costs and circulation expenses, the management of material and monetary resources with maximum efficiency, the providing of a strict regimen of economisation and the strengthening of plan and financial discipline in all sectors of activity.

Expressing the volume of useful, value-creating activity in each unit, the value of the net output constitutes an instrument for self-administration and self-financing, since:

It shows, for each work staff, the contribution to the creation of national income, to the growth of national wealth;

It constitutes the source for covering expenses of the enterprise, such as those regarding the payment of wages;

It represents the source for forming the enterprise's own funds, funds of society, and those for giving the working people an incentive to perform an

efficient and profitable activity. Profit, as a component element of the value of the net output, synthesizes this source.

The use of the indicators of the value of the net output and the physical output as basic indicators for pursuing higher efficiency requires that in their activity the units devote, in this context, special attention to the indicators: commodity output, building-assembly production, and volume of services and of sales of goods, which are meant to measure the volume of the products, work and services executed for the national economic circuit and for exportation. Under these conditions, the fact that in using the economic potential that it possesses, in accordance with the provisions of the sole national plan for economic and social development, it must establish and achieve the production and services in the physical structure corresponding to the requirements of the domestic and foreign market, determined by means of economic contracts or firm orders, is decisive for each economic unit in performing the economic activity as efficiently as possible.

The pursuit of the achievement of the receipts, of the commodity output sold and paid for, which, in the end-together with the level of the expenditures made-determine concretely the profit achieved, must also constitute a central objective of the activity of the management bodies in each economic unit. The receipts and the indicator of the commodity output sold and paid for permit the synthetic commensuration of each unit's economic activity, recognized as socially useful.

Profit expresses synthetically the results of the labor put forth by the economic units, the manner of management of funds, the reduction of material expenditures and the raising of labor productivity, the efforts made in order to continually increase the newly created value. It represents the basic resource for forming the fund for economic and social development and the social consumption fund. The achievement of a greater volume of profits, corresponding to the efforts made for the technical-material equipping of the economic units, constitutes an objective necessity for the economic and social development of the country.

A synthetic expression of the economic and financial results of each economic unit, profit expresses the effort of the work staff in the field of achieving the physical output, its quality, the organisation of the technical-material supply, production, sales and receipts, and the progress obtained in the raising of labor productivity, the reduction of production costs and the promotion of technical progress.

Through its functions as a main resource for expanded reproduction, for economic and financial self-administration and for the self-financing of the enterprises, as a means of giving the work staffs an incentive to use as efficiently as possible the funds entrusted by society, as a synthetic indicator for judging the efficiency of the activity performed, and as an instrument for control over the manner of conducting the activity and the

management of material and monetary resources, profit constitutes, at a macroeconomic and microeconomic level, the indicator that reflects the manner of fulfillment of the tasks that result from the application of the new economic and financial mechanism.

Profit determines, in the main, the content of the notion of economic and financial self-administration, according to which the economic units must perform their activity for fulfilling the tasks stipulated in the sole national plan and in the state budget so that they cover their expenses from their own incomes and have profits from which they repay the sums advanced by society, provide the funds needed for their own development, provide material incentives for worker personnel and contribute to the formation of the state's centralized resources, meant to finance projects and actions of general interest.

By means of the manner of regulating the allocation of profit the fulfillment of the objectives pursued by expanding its role in economic and social development is ensured. Thus, the profits achieved within the framework of the plan are allocated, in the main, for the enterprise's fund for economic development, the fund of circulating funds, the fund for housing construction and other investments with a social character, the fund for social actions, the fund for sharing profits with the working people, and payments to the state budget.

A significant party of the profit in excess of the plan is allocated for the development fund of the enterprise and for the supplementation of the fund for sharing profits with the working people.

The economic units have the obligation that a part of the profits achieved within the framework of the plan be used to repay the sums received from society. The payments to the budget and those to the account of the sums received from society correspond to the requirement that each economic unit make a greater contribution to the formation of the general funds for economic development.

In this view, promoted by our party and state, profit becomes a way to develop society and to increase the income of each working person in the economic unit, reflecting a harmonisation of the general interests with those of each enterprise, as well as with the direct ones of the participants in achieving the profits. The formation of the enterprise's own funds from the profits achieved within the framework of the plan and in excess of the plan and the raising of the direct incomes of the working people by means of the profits achieved by the enterprise in which they perform their activity bring about the strengthening of worker self-leadership, of economic and financial self-administration, of the personal interest of the enterprises and the work staffs in the good organisation of production, in the efficient management of material and monetary resources.

The institutionalisation of the sharing of profits with the working people, as a means of directly increasing their incomes, has proved stimulative for the staffs of working people.

Both the funds of the enterprises and the fund for sharing the profits achieved are formed completely in the case of the fulfillment of the plan targets for physical output and net output, of the planned volume of receipts, as well as under the conditions of the complete fulfillment of the planned profit. The nonfulfillments are reflected in the size of the profit-sharing fund. The overfulfillment of the targets established leads to the increasing of the fund for sharing profits with the working people by means of the profit achieved in excess of the plan.

As a basic instrument at the disposal of the collective leadership bodies in each economic unit for the strengthening of economic and financial self-administration and of self-financing, for the planning and pursuit of the achievement of profit, there has been introduced the income and expense budget, which represents a synthesis, in monetary terms, of the economic and social activity in each unit, of the manner of management of material and monetary resources, of the results obtained and of the degree of efficiency of the activity performed.

The income and expense budget must be used by each socialist unit as an instrument for planning of financial activity, as an instrument for analysis of financial execution and financial equilibrium, of the equilibrium between receipts and payments, as an instrument for control and management of economic and financial activity. The periodic analysis, within the collective leadership bodies, of the manner of fulfillment of the provisions of the income and expense budget must lead to the taking of the steps needed to make up the possible lags in the activity of the departments of the unit and especially in physical output, net output, costs and profits.

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July 31, 1980

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